



# AFCTN Test Report 94-005

AFCTB-ID  
93-030



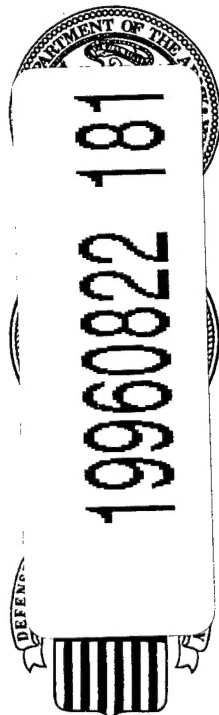
## Technical Publication Transfer

Using:



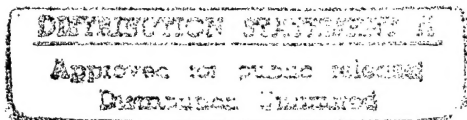
Northrop Corporation's Data

MIL-D-28000A (IGES)  
MIL-M-28001A (SGML)  
MIL-R-28002A (Raster)  
MIL-D-28003 (CGM)



Quick Short Test Report

13 April 1993



Prepared for  
Electronic Systems Center

DTIC QUALITY INSPECTED 3

# DISCLAIMER NOTICE



**THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.**

**AFCTN Test Report**  
94-005

**AFCTB-ID**  
93-030

---

**Technical Publication Transfer**  
**Using:**  
**Northrop Corporation's Data**

**MIL-D-28000A (IGES)**  
**MIL-M-28001A (SGML)**  
**MIL-R-28002A (Raster)**  
**MIL-D-28003 (CGM)**

**Quick Short Test Report**  
**13 April 1993**

---

**Prepared By**  
Air Force CALS Test Bed  
Wright-Patterson AFB, OH 45433

**AFCTB Contact**  
Gary Lammers  
(513) 427-2295

**AFCTN Contact**  
Mel Lammers  
(513) 427-2295

**DTIC QUALITY INSPECTED 3**

## **DISCLAIMER**

This document was prepared as an account of work sponsored by the Air Force. Neither the United States Government, the Air Force, nor any of their employees makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, nor represents that its use would not infringe on privately owned rights. Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or the Air Force. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or the Air Force, and shall not be used for advertising or product endorsement purposes.

Available to the public from the  
National Technical Information Service  
U.S. Department of Commerce  
5285 Port Royal Road  
Springfield, VA 22161

This report and those involved in its preparation do not endorse any product, process, or company stated herein. Use of these means by anyone does not imply certification by the Air Force CALS Test Network (AFCTN).

---



---

## Contents

1.	Introduction.....	1
1.1.	Background.....	1
1.2.	Purpose.....	2
2.	Test Parameters.....	3
3.	1840A Analysis.....	6
3.1.	External Packaging.....	6
3.2.	Transmission Envelope.....	6
3.2.1.	Tape Formats.....	6
3.2.2.	Declaration and Header Fields.....	6
4.	IGES Analysis.....	7
5.	SGML Analysis.....	10
6.	Raster Analysis.....	10
7.	CGM Analysis.....	11
8.	Conclusions and Recommendations.....	13
9.	Appendix A - Tapetool Report Logs.....	14
9.1.	Tape Catalog.....	14
9.2.	Tape Evaluation Log.....	15
9.3.	Tape File Set Validation Log.....	17
10.	Appendix B - Detailed IGES Analysis.....	20
10.1.	File D001Q004.....	20
10.1.1.	Parser/Verifier Log.....	20
10.1.2.	Parser Log - AutoCAD R12.....	25

10.1.3.	Output AutoCAD R12.....	30
10.1.4.	Output Cadkey v5.02.....	31
10.1.5.	Output CheckMark v1.00.....	32
10.1.6.	Output IGESView.....	33
10.1.7.	Output IGESWorks.....	34
10.1.8.	Output Preview.....	35
10.1.9.	Output Wiz Worx.....	36
10.1.10.	Output iges2draw/IslandDraw.....	37
10.2.	File D001Q007.....	38
10.2.1.	Parser/Verifier Log.....	38
10.2.2.	Parser Log - AutoCAD R12.....	43
10.2.3.	Output AutoCAD R12.....	48
10.2.4.	Output Cadkey v5.02.....	49
10.2.5.	Output CheckMark v1.00.....	50
10.2.6.	Output IGESView.....	51
10.2.7.	Output IGESWorks.....	52
10.2.8.	Output Preview.....	53
10.2.9.	Output Wiz Worx.....	54
10.2.10.	Output iges2draw/IslandDraw.....	55
11.	Appendix C - Detailed SGML Analysis.....	56
11.1.	Datalogics Parser Log.....	56
11.2.	Exoterica XGMLNormalizer Parser.....	57
11.3.	Exoterica xvalid.....	57
11.4.	Sema Mark-it Log.....	58

---

---

11.5. Public Domain sgmls Log.....	58
12. Appendix D - Detailed Raster Analysis.....	59
12.1. Output HiJaak for Windows.....	59
12.2. Output g42tiff/IslandPaint.....	60
12.3. Output Preview.....	61
12.4. Output HiJaak/Ventura Publisher.....	62
12.5. Output IGESView.....	63
13. Appendix E - Detailed CGM Analysis.....	64
13.1.1. Parser Log MetaCheck.....	64
13.1.2. validcgm Log.....	65
13.1.3. Output Harvard Graphics.....	67
13.1.4. Output cgm2draw/IslandDraw.....	68
13.1.5. Output CADLeaf.....	69

## **1. Introduction**

### **1.1 Background**

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

## 1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Northrop Corporation's interpretation and use of the CALS standards in transferring technical publication data. Northrop used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

---

## 2. Test Parameters

Test Plan: AFCTB 93-030

Date of  
Evaluation: 13 April 1993

Evaluator: George Elwood  
Air Force CALS Test Bed  
DET 2 HQ ESC/ENCP  
4027 Colonel Glenn Hwy  
Suite 300  
Dayton OH 45431-1672

Data  
Originator: John P. Kent  
Northrop Corporation  
B-2 Division  
L591/GK  
8900 East Washington Blvd  
Pico Rivera CA 90660  
(310) 948-0624

Data  
Description: Technical Manual Test  
1 Document Declaration file  
1 Document Type Definitions (DTD)  
4 Initial Graphics Exchange Specification  
(IGES) files  
1 Text file  
1 Raster file  
1 Computer Graphics Metafile (CGM) file

Data  
Source System:

IGES

### HARDWARE

Unknown

### SOFTWARE

Unknown

---

TEXT/Standard Generalized Markup Language (SGML)

HARDWARE  
Unknown  
SOFTWARE  
Unknown

Raster

HARDWARE  
Unknown  
SOFTWARE  
Unknown

CGM

HARDWARE  
Unknown  
SOFTWARE  
Unknown

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN Tapetool v1.2.8 UNIX  
XSoft CAPS/CALS v40.4  
Texas Instruments (TI) Tapetool v1.0.1

MIL-D-28000 (IGES)

Sun SparcStation 2

AUTODESK AutoCAD R12  
ArborText iges2draw  
IGES Data Analysis (IDA) Parser/Verifier v92  
IDA IGESView v3.05  
International TechneGroup Incorporated  
(ITI) IGES/Works v1.3  
Rosetta Technologies Preview v3.2

PC 486/50

AUTODESK AutoCAD 386 R12  
AUTODESK AutoCAD 386 R11  
AUTODESK Micro Engineering Solutions  
(MES) CheckMark v1.0  
Cadkey Cadkey v5.02

---

Wiz Worx igs2jet

MIL-M-28001 (SGML)

Cheetah Gold 486

Datalogics ParserStation v3.36  
Exoterica XGMLNormalizer v1.2e3.2  
Exoterica Validator v2.0 EXL.  
McAfee & McAdam Sema Mark-it v2.3  
Public Domain sgmls

MIL-R-28002 (Raster)

SUN SparcStation 2

ArborText g42tiff  
AFCTN validg4  
AFCTN calstb.475  
IDA IGESView 3.0  
Island Graphics IslandPaint 3.0

Cheetah

Inset Systems HiJaak V2.1  
Inset Systems HiJaak Window v1.0  
Corel Ventura Publisher

MIL-D-28003 (CGM)

SUN SparcStation 2

ArborText cgm2draw  
Island Graphics IslandDraw 3.0

Cheetah Gold 486

Advance Technology Center  
(ATC) MetaView R 1.12  
ATC MetaCheck R 2.05  
Software Publishing Corporation  
(SPC) Harvard Graphics 3.05  
Inset Systems HiJaak v2.1  
Inset Systems HiJaak v1.0 Windows  
Micrografx Designer 3.1  
Corel Ventura Publisher

Standards

Tested:

MIL-STD-1840A  
MIL-D-28000A  
MIL-M-28001A  
MIL-R-28002A  
MIL-D-28003



### **3. 1840A Analysis**

#### **3.1 External Packaging**

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files recorded on the tape.

#### **3.2 Transmission Envelope**

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

##### **3.2.1 Tape Formats**

The tape was run through the AFCTN *Tapetool* v1.2.8 utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read without a reported problem using XSoft's *CAPS read1840A* utility.

The tape was read without a reported problem using TI's *Tapetool* v1.0.1.

##### **3.2.2 Declaration and Header Fields**

No errors were found in the Document Declaration file or data file headers.

---

The physical structure of the tape meets the CALS MIL-STD-1840A requirements.

#### 4. IGES Analysis

The tape contained four IGES files. These files were evaluated using IDA's *Parser* and *Verifier*. These utilities reported that all four files contain similar basic IGES cautions, but they meet the CALS Class I specification.

Because the cautions were the same for all four files, file D001Q004 will be used as an example. File D001Q007 is also include in the Appendix as a second example. The following cautions are basic IGES cautions and not CALS errors.

The first noted caution was a warning on line thickness. The maximum and minimum line thickness were the same.

Maximum line thickness = 6.300000E-03

Minimum line thickness = 6.300000E-03

CAUTION 2317: Maximum line thickness equal to minimum thickness.

The reported caution was in entity 104. The start and end points were offset.

\*\*\* Entity type: 104

WARNING 2265: Start point off conic by 1.190300E-03 at D 539.

WARNING 2039: End point off conic by 1.388423E-03 at D 743.

Although not reported in file D001Q004, file D001Q007 reported a polynomial degeneration. This was also reported in the other two files.

\*\*\* Entity type: 112

WARNING 2238: Polynomial segment (0) at D 1351 is degenerate.

---

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were Performed using the default settings.

The files were converted using the 5.1 IGES translator in AUTODESK's AutoCAD R12. The error log from files D001Q004 and D001Q007 are included in the Appendix to this report. These logs report similar errors as IDA parser. Shown below are samples of the errors reported by this utility and actions taken to correct the problem.

\*\*\* Warning (IEVM\_BAD\_VECTOR\_124) \*\*\*

(DE 493, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

\*\*\* Warning (IEVM\_BAD\_START\_POINT\_104) \*\*\*

(DE 495, TF 104:1) Entity's start point not on the conic. Value found was  
1.2643260e-002, 6.7795300e-003.

Action taken: Start point moved 1.5608861e-003 units, from 1.2643260e-002,  
6.7795300e-003 to 1.4204146e-002, 6.7795300e-003.

The generated images appear to match the files output by other CAD software available in the AFCTB.

The four files were converted using Cadkey's *ig2c* utility with no reported errors. The resulting files were read into Cadkey's *Cadkey*, displayed and printed. The resulting images appear to match the other output copies.

The four files were read into MES's *CheckMark* software without a reported error. The only noted error was the missing arrowheads on the leader lines.

The four files were read into IDA's *IGESView* without a reported error. The images displayed and printed, which appeared to match the other hard copies.

The four files were read into ITI's *IGESWorks* without a reported problem. The displayed and hard copy output appear to match the files of other systems.

The four files were converted using Rosetta Technologies' *Prepare*. This utility reported some non-supported entities during the conversion process. The resulting files were imported into *Preview* and displayed. The resulting hard copies match the output of the other systems.

The four files were read into the *Wiz Worx igs2jet* utility. This program will directly output an IGES file to a HP LaserJet printer. No errors were reported during this procedure. The resulting hard copies matched the other hard copies generated during this evaluation.

The four files were converted using ArborText's *iges2draw* utility. The resulting files were read into Island Graphics' *IslandDraw*. When this was accomplished nothing displayed on the screen. The files were sent to both ArborText and IDA who provides the translator to ArborText. The error was traced to a "bad" IGES file. IDA pointed out that the IGES file was placed in a negative area. Note in the view information for file Q004 from AUTODESK'S AutoCAD 5.1 translator the location of the view. The X value has a negative value which placed the view outside the normally define area. The CAD and CAD viewing software was able to move the viewing area to cover the negative value.

A new view volume has been generated for the view with:

XMIN (-4.641649), XMAX (0.401133),  
YMIN (0.456990), YMAX (7.663985),  
ZMIN (-0.688634), ZMAX (0.688634).

Not listed in the ArborText conversion manual but shown using the help option with *iges2draw* is the bound option. This permits the negative number to be accepted and used. When this option was tried the images was displayed and printed, matching the other generated files. The information on the bound option was provided by IDA and ArborText.

No CALS errors were reported during the evaluation of these files.

## 5. SGML Analysis

The AFCTB has several parsers available for evaluating submitted DTD and Text files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. These products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings unless specified in the report. Changes to DTD or Text files required by each system are not documented in the report.

The Text and DTD files from the tape were evaluated using Datalogics' *ParseStation*. No errors were reported in the DTD or Text file.

The Text and DTD files from this document were evaluated using the Exoterica *Validator* parser. This parser reported three mixed content models and one no value for attribute.

The Text and DTD files from this document were tested using the Exoterica *XGMLNormalizer* parser. No errors were reported during this procedure in either the DTD or Text file.

The Text and DTD files from the tape were evaluated using McAfee & McAdam's *Sema Mark-it* parser. No errors were reported in the DTD or Text file.

The Text and DTD files from the tape were evaluated using the Public Domain *sgmls* parser. No errors were reported during the use of this utility in either the DTD or Text file.

The Text files meet the CALS MIL-M-28001A specification.

## 6. Raster Analysis

The tape contained one Raster file. The file was evaluated using the AFCTN *validg4* utility which reported the file as a valid CALS Raster file. The file was viewed using the AFCTN *calstb.475* utility. The image was straight with few orphan pixels noted.

---

The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were Performed using the default settings.

The file was converted, displayed, and printed using the following software tools without a reported error.

Rosetta Technologies' *Prepare/Preview*  
Inset System's *HiJaak*  
Corel's *Ventura Publisher*  
Inset Systems' *HiJaak for Windows*  
IDA's *IGESView*  
Carberry's *CADLeaf*

The Raster file meets the CALS MIL-R-28002A specification.

## 7. CGM Analysis

The tape contained one CGM file. This file was evaluated using ATC's *MetaCheck* with CALS options. This utility reported that the file meets the CALS MIL-D-28003 specification.

The beta AFCTN *validcgm* utility reported some problems.

The AFCTB has several tools for viewing CGM files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor and indication of CALS capability. All operations were Performed using the default settings.

The file was viewed using ATC's *MetaView*. The image displayed correctly with some problems noted in the text area. The file did generate an error message during this procedure.

The file was converted using ArborText's *cgm2draw* utility without a reported error. The resulting file was read into Island Graphics' *IslandDraw* and displayed. The images appeared on the screen and printed without the text being displayed. This was traced to the background color and text being the same color.

The file was imported into Carberry's *CADLeaf* software without a problem. The background was a darker color which permitted the text to be displayed.

The file was imported into SPC's *Harvard Graphics* with reported errors. Line style errors and non-translated objects were reported. When displayed and printed the image consisted of random lines, arcs and text.

The file was imported directly into Island Graphics' *IslandDraw* without a reported error. This resulted with all the graphics displayed along the top of the screen.

When an attempt to read the file into Corel's *Ventura Publisher* was made, the software reported that the file was not a valid file.

When the file was imported into the *Micrografx Designer*, nothing was displayed and no error messages were generated.

According to Michael Harrison of Micrografx, "Micrografx is aware of the problems associated with reading these files and is working on a solution to be implemented in a future release of our products."

When the file was imported into Inset System's *HiJaak for Windows* nothing was displayed and no error message were generated.

When an attempt to convert the file using Inset System's *HiJaak for DOS*, the computer hung and required a reboot. This was tried twice with the same results.

The file was reported as meeting the CALS MIL-D-28003 specification.

## 8. Conclusions and Recommendations

In summary, the physical tape structure from Northrop Corporation is correct.

The IGES files on the tape meet the CALS MIL-D-28000A specification, although some basic IGES errors were reported.

The DTD and Text files meet the CALS MIL-M-28001A specification.

The Raster file meets the CALS MIL-R-28002A specification.

The CGM file was reported as meeting the CALS MIL-D-28003 specification.

The submitted tape and data files meet the CALS MIL-STD--1840A requirements defined above.



## 9. Appendix A - Tapetool Report Logs

### 9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Tue Apr 13 08:07:18 1993

MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set082

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000009	Extracted
D001G002	DTD	D/00260	02048/000010	Extracted
D001H003	Output Specification	D/00260	02048/000050	Extracted
D001Q004	IGES	F/00080	02000/000281	Extracted
D001Q005	IGES	F/00080	02000/000138	Extracted
D001Q006	IGES	F/00080	02000/000224	Extracted
D001Q007	IGES	F/00080	02000/000224	Extracted
D001C008	CGM	F/00080	00800/000062	Extracted
D001R009	Raster	F/00128	02048/000017	Extracted

Catalog Process terminated normally.

---

## 9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8

Standards referenced:

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Tue Apr 13 08:06:28 1993

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01

CONTROLLER

4

Label Identifier: VOL1  
Volume Identifier: ITDS01  
Volume Accessibility:  
Owner Identifier:  
Label Standard Version: 4

HDR1D001

ITDS0100010001000100 93090 93090 000000 CONTROLLER

Label Identifier: HDR1  
File Identifier: D001  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93090  
Expiration Date: 93090  
File Accessibility:  
Block Count: 000000  
Implementation Identifier: CONTROLLER

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

---

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 1.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001                    ITDS0100010001000100 93090 93090 000001 CONTROLLER

Label Identifier: EOF1  
File Identifier: D001  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93090  
Expiration Date: 93090  
File Accessibility:  
Block Count: 000001  
Implementation Identifier: CONTROLLER

EOF2D0204800260

00

Label Identifier: EOF2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\*\*\* Tape Mark \*\*\*\*\*

\*\*\*\*\* Tape Mark \*\*\*\*\*

##### End of Volume ITDS01 #####  
##### End Of Tape File Set #####

Deallocating /dev/rmt0...

Tape Import Process terminated with 0 error(s), 0 warning(s),  
and 0 note(s).

---

## 9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number 8  
Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Tue Apr 13 08:07:18 1993

MIL-STD-1840A File Set Evaluation Log

File Set: Set082

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK  
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: 1B-2A-2-21JG-10-1

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19910301

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,  
TechneCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: 1B-2A-2-21JG-10-1

dstrelid: NONE

dtetrn: 19930331

dlvacc: NONE

filcnt: T1, H1, G1, C1, Q4, R1

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: JOB GUIDE

doctl: ENVIRONMENTAL CONTROL - ECS CONTROL

Found file: D001T001

Extracting Text Header Records...

Evaluating Text Header Records...

srcdocid: 1B-2A-2-21JG-10-1

dstdocid: 1B-2A-2-21JG-10-1

txtfilid: W

doccls: UNCLASSIFIED

notes: NONE

Saving Text Header File: D001T001\_HDR

Saving Text Data File: D001T001\_TXT

Found file: D001G002  
Extracting DTD Header Records...  
Evaluating DTD Header Records...

srcdocid: 1B-2A-2-21JG-10-1  
dstdocid: 1B-2A-2-21JG-10-1  
notes: NONE

Saving DTD Header File: D001G002\_HDR  
Saving DTD Data File: D001G002\_DTD

Found file: D001H003  
Extracting Output Specification Header Records...  
Evaluating Output Specification Header Records...

srcdocid: 1B-2A-2-21JG-10-1  
dstdocid: 1B-2A-2-21JG-10-1  
notes: NONE

Saving Output Specification Header File: D001H003\_HDR  
Saving Output Specification Data File: D001H003\_OS

Found file: D001Q004  
Extracting IGES Header Records...  
Evaluating IGES Header Records...

srcdocid: 1B-2A-2-21JG-10-1  
dstdocid: 1B-2A-2-21JG-10-1  
txtfilid: W  
figid: NONE  
srcgph: B2AJG2111-0101A  
doccls: UNCLASSIFIED  
notes: NONE

Saving IGES Header File: D001Q004\_HDR  
Saving IGES Data File: D001Q004\_IGS

<<<<< PART OF LOG REMOVED HERE >>>>>

Found file: D001C008  
Extracting CGM Header Records...  
Evaluating CGM Header Records...

srcdocid: 1B-2A-2-21JG-10-1  
dstdocid: 1B-2A-2-21JG-10-1

---

txtfilid: W  
figid: NONE  
srcgph: B2AJG2111-0103D  
doccls: UNCLASSIFIED  
notes: NONE

Saving CGM Header File: D001C008\_HDR  
Saving CGM Data File: D001C008\_CGM

Found file: D001R009  
Extracting Raster Header Records...  
Evaluating Raster Header Records...

srcdocid: 1B-2A-2-21JG-10-1  
dstdocid: 1B-2A-2-21JG-10-1  
txtfilid: W  
figid: NONE  
srcgph: B2AJG2111-0104D  
doccls: UNCLASSIFIED  
rtype: 1  
rorient: 000,270  
rpelcnt: 003408,004408  
rdensty: 0400  
notes: NONE

Saving Raster Header File: D001R009\_HDR  
Saving Raster Data File: D001R009\_GR4

Evaluating numbering scheme...  
No errors were encountered during numbering scheme evaluation.  
Numbering scheme evaluation complete.

Checking file count...  
No errors were encountered during file count verification.  
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

---

## 10. Appendix B - Detailed IGES Analysis

### 10.1 File D001Q004

#### 10.1.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***
***      MARCH 1992      ***
***   IGES Data Analysis   ***
***   (708) 449-3430      ***
```

Input file is /novell/9330/q004.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is April 13, 1993 9:09 AM

#### \*\*\* File and Product Name Information \*\*\*

```
File name from sender   = '0101A.gef.igs'
File creation Date.Time = '930218.130008'
Model change Date.Time  = ''
Author                  = 'NORTHROP B2 ITDS CTB'
Department              = ''
Product name from sender = '0101A.gef.igs'
Destination product name = '0101A.gef.igs'
```

#### \*\*\* Parameter Delimiters \*\*\*

```
Delimiter = ','
Terminator = ';'

```

#### \*\*\* Originating System Data \*\*\*

```
System ID           = 'ITDS CONVERTER: GEF_IGES'
Preprocessor version = '1.0'
Specification version = 6 (IGES 4.0)
```

#### \*\*\* Precision levels \*\*\*

```
Integer bits = 32
Floating point - Exponent = 38 Mantissa = 6
Double precision - Exponent = 308 Mantissa = 15
```

#### \*\*\* Global Model Data \*\*\*

---

Model scale = 1.0000E+00  
Unit flag = 1  
Units = 'IN'  
Line weights = 1  
Maximum line thickness = 6.300000E-03  
Minimum line thickness = 6.300000E-03  
CAUTION 2317: Maximum line thickness equal to minimum thickness.  
Granularity = 1.000000E-03  
Maximum coordinate = 7.243750E+00

Drafting standard applicable to original data is not specified.

\*\*\* Status Flag Summary \*\*\*

Blank status:	Visible	1850
	Blanked	0
Independence:	Independent	1838
	Physically Subordinate	8
	Logically Subordinate	4
	Totally Subordinate	0
Entity use:	Geometry	1831
	Annotation	19
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	1850
	Hierarchy property applies	0
	Not Specified	0

\*\*\* Entity Occurrence Counts \*\*\*

Entity	Form	Level	Count	Type
-----	-----	-----	-----	-----
104	1	0	659	Conic arc - ellipse
106	63	0	8	Simple closed planar curve
110	0	0	497	Line
112	0	0	5	Parametric spline curve
124	0	0	659	Transformation matrix
212	0	0	9	General note

---



230	0	0	8	Sectioned area (Standard Crosshatching)
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
406	18	0	2	Property - Intercharacter spacing
410	0	0	1	View - Orthographic parallel

\*\*\* Entity Count by Level \*\*\*

Level	Count
0	1850

\*\*\* Labeling Information \*\*\*

0% of the entities are labeled.

Unlabeled 1850

\*\*\* Line Fonts Used in Data \*\*\*

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
-	-	166	8	-	42	4	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	493	-	-	455	1	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
116	118	120	122	124	125	126	128	
-	-	-	-	659	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
130	132	134	136	138	140	142	144	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted

---

- - - - - User defined

\*\*\* Line Widths Used in Data \*\*\*

Weight	Count	Width
Defaulted	1850	(0.0063)

\*\*\* Colors Used in Data \*\*\*

Defaulted	1784
Black	57
White	9

\*\*\*\*\*  
\*\*\*\*\* ENTITY ANALYSIS \*\*\*\*\*  
\*\*\*\*\*

\*\*\* Entity type: 104

WARNING 2265: Start point off conic by 1.190300E-03 at D 539.  
WARNING 2039: End point off conic by 1.388423E-03 at D 743. WARNING 2265: Messages regarding invalid start point suppressed. WARNING 2039: Messages regarding conic end p suppressed.

\*\*\* Entity type: 106

\*\*\* Entity type: 110

-- 497 lines averaging 2.015512E-01 units --

\*\*\* Entity type: 112

\*\*\* Entity type: 124

659 transformation matrices, 659 non-zero translations.

NOTE 2341: 659 matrices contain translation information.

\*\*\* Entity type: 212

9 text strings in data file.  
Average text aspect ratio in file is 0.9883842.  
Minimum text aspect ratio in file is 0.9821430.  
Maximum text aspect ratio in file is 0.9910715.

FONTS USED IN FILE

FONT	COUNT	NAME
1	9	Default ASCII Style

\*\*\* Entity type: 230

\*\*\* Entity type: 404

Drawing at D        5 contains 1 views.  
Drawing at D        5 contains 0 annotation entities.

\*\*\* Entity type: 406

\*\*\* Entity type: 410

Scale of view at D        1 is 1.000000E+00.  
Orthographic View entity at D        1 has 0 clipping planes specified.  
XMIN = Not Set        XMAX = Not Set  
YMIN = Not Set        YMAX = Not Set  
ZMIN = Not Set        ZMAX = Not Set

\*\*\* Message Summary \*\*\*

2015: 98 Mathematically incorrect definitions.  
2018: 1 Problems with line weight/width display information.

\*\*\* Error Summary \*\*\*

0 fatal errors  
0 severe errors  
0 errors  
98 warnings  
1 cautions  
0 nitpicks  
1 notes

\*\*\* End of Analysis of /novell/9330/q004.igs \*\*\*

## 10.1.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

File: I:/9330/Q004.xli

Date: Tue, Apr 13, 1993

Time: 09:51:28

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750

Translating from IGES file: I:/9330/Q004.IGS  
to AutoCAD Drawing: C:\Q004.dwg

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01

Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin

5

DOT

acad.lin

=====

Parse phase

\*\*\* Warning (IEVM\_BAD\_VECTOR\_124) \*\*\*

(DE 493, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

\*\*\* Warning (IEVM\_BAD\_START\_POINT\_104) \*\*\*

(DE 495, TF 104:1) Entity's start point not on the conic. Value found was  
1.2643260e-002, 6.7795300e-003.

Action taken: Start point moved 1.5608861e-003 units, from 1.2643260e-002,  
6.7795300e-003 to 1.4204146e-002, 6.7795300e-003.

<<<< PART OF LOG REMOVED HERE >>>>

\*\*\* Warning (IEVM\_BAD\_VECTOR\_124) \*\*\*

(DE 589, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

=====

Start Section:

CONFORMANCE:

MIL-D-28000 Amendment1, 20 December 1988  
Technical Illustration Class I Subset

ILLUSTRATION IDENTIFIER:

0101A.gef.igs

Global Section:

Parameter Delimiter: ,  
Record Delimiter: ;  
Sending Product ID: 0101A.gef.igs  
File Name: 0101A.gef.igs  
System ID: ITDS CONVERTER: GEF\_IGES  
Preprocessor Version: 1.0  
Size of Integer: 32  
Sgl. Precision Mag: 38  
Sgl. Precision Sig: 6  
Dbl. Precision Mag: 308

Dbl. Precision Sig: 15  
Receiving Product ID: 0101A.gef.igs  
Model Space Scale: 1.000000  
Unit Flag: 1  
Unit String: IN  
# of Line Weights: 1  
Maximum Line Width: 0.006300  
Creation Date: 02/18/93 13:00:08  
Minimum Resolution: 0.001000  
Maximum Coordinate: 7.243750  
Author: NORTHROP B2 ITDS CTB  
Organization:  
IGES Version Number: 6  
Drafting Standard: 0

Entity Summary:

Type	Form	Description	Count
104	1	Ellipse	659
106	63	Simple Closed Planar Curve	8
110	0	Line	497
112	0	Parametric Spline Curve	5
124	0	Transformation Matrix	659
212	0	General Note (Simple)	9
230	0	Section Area (Standard Fill)	8
404	0	Drawing (form 0)	1
406	16	Property (Drawing Size)	1
406	18	Property (Int-character Spacing)	2
410	0	View	1
Total			1850

Translation phase

Drawing Entity (404 Form 0) at DE 5, with

name = ,  
size = 3.937500, 6.300000,  
units = IN,

was processed in the AutoCAD drawing file: C:\Q004.dwg

\*\*\* Warning (ACAD\_NEW\_VIEW\_VOLUME\_GENERATED) \*\*\*

( DE: 1 TF: 410:0 )

A new view volume has been generated for the view with:

XMIN (-4.641649), XMAX (0.401133),  
YMIN (0.456990), YMAX (7.663985),

ZMIN (-0.688634), ZMAX (0.688634).

IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
104	1	Ellipse	659	659	0
106	63	Simple Closed Planar Curve	9	9	0
110	0	Line	497	497	0
112	0	Parametric Spline Curve	5	5	0
212	0	General Note (Simple)	9	9	0
230	0	Section Area (Standard Fill)	8	8	0
404	0	Drawing (form 0)	1	1	0
406	16	Property (Drawing Size)	1	1	0
410	0	View	1	1	0
Totals			1190	1190	0

Unsupported IGES Entity Summary

Type	Form	Description	Count
406	18	Property (Int-character Spacing)	2
Total			2

AutoCAD Entity Summary

Entity	Created	Errors
LINE	953	0
Text	9	0
SOLID	7	0
INSERT	1	0
POLYLINE	210	0
BLOCK	1	0
Totals	1181	0

Error Summary:

The following message was issued 659 time(s)  
Entity's start point not on the conic. Value found was %.7e, %.7e.

The following message was issued 658 time(s)  
Entity's End Point not on the conic. Value found was %.7e, %.7e.

---

The following message was issued 610 time(s)  
Entity has a column which is not a unit vector.

The following message was issued 1 time(s)  
A new view volume has been generated for the view with:  
XMIN (%lf), XMAX (%lf),  
YMIN (%lf), YMAX (%lf),  
ZMIN (%lf), ZMAX (%lf).

Status: 0  
Warning: 1928  
Error: 0  
Fatal: 0

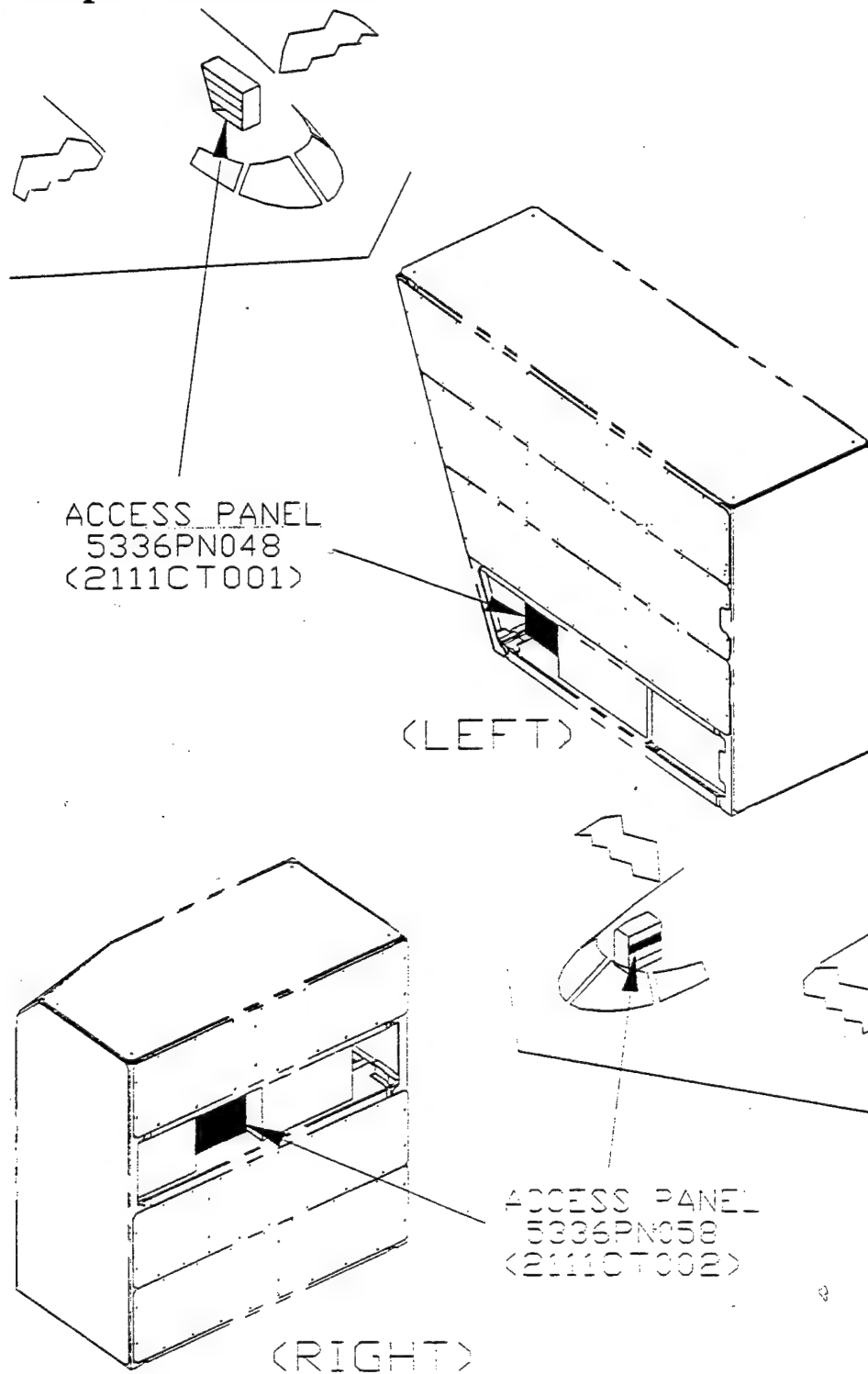
Elapsed Time:

Processor: 00:01:09  
Clock: 00:01:09

=====

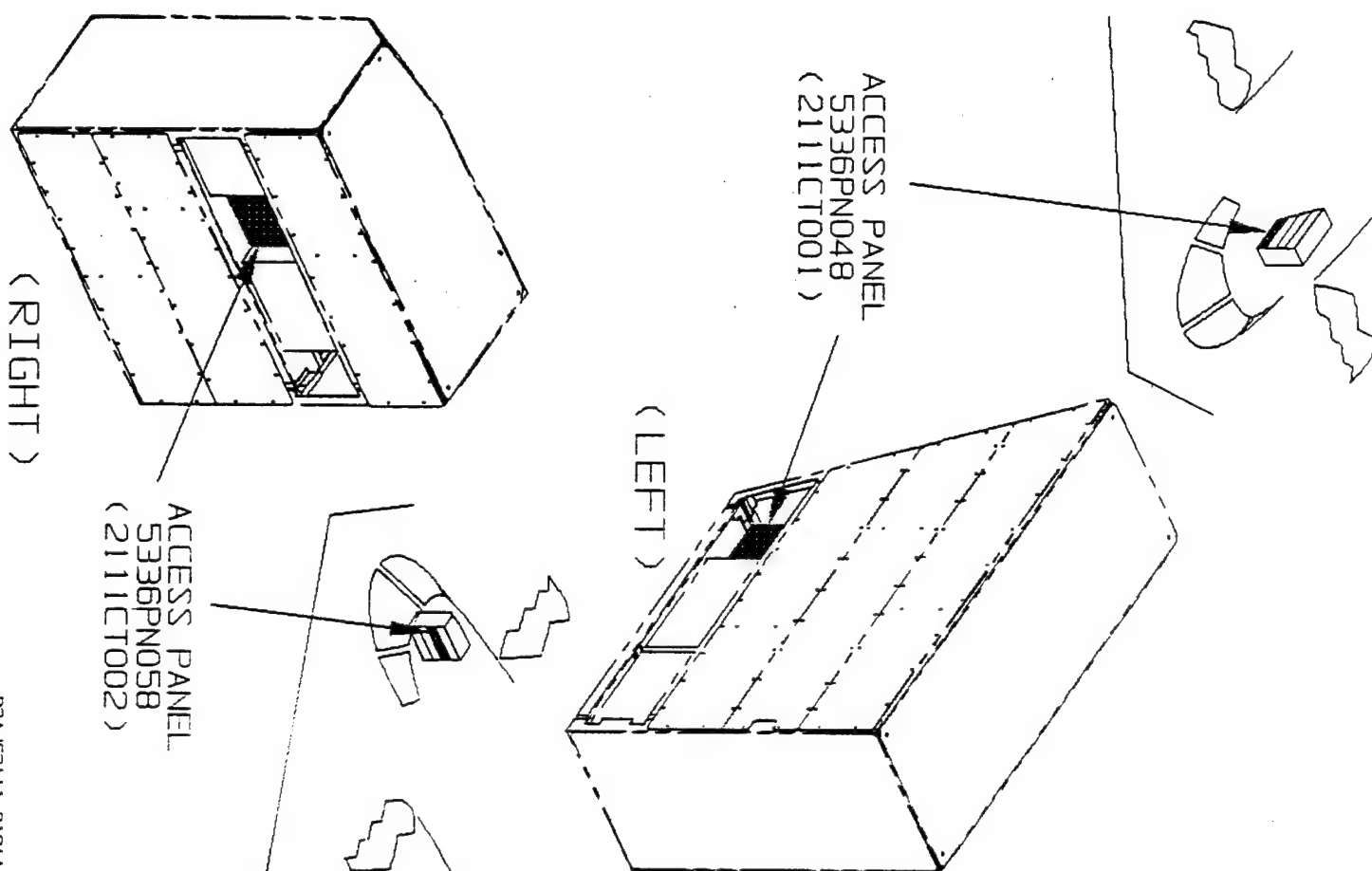


### 10.1.3 Output AutoCAD R12



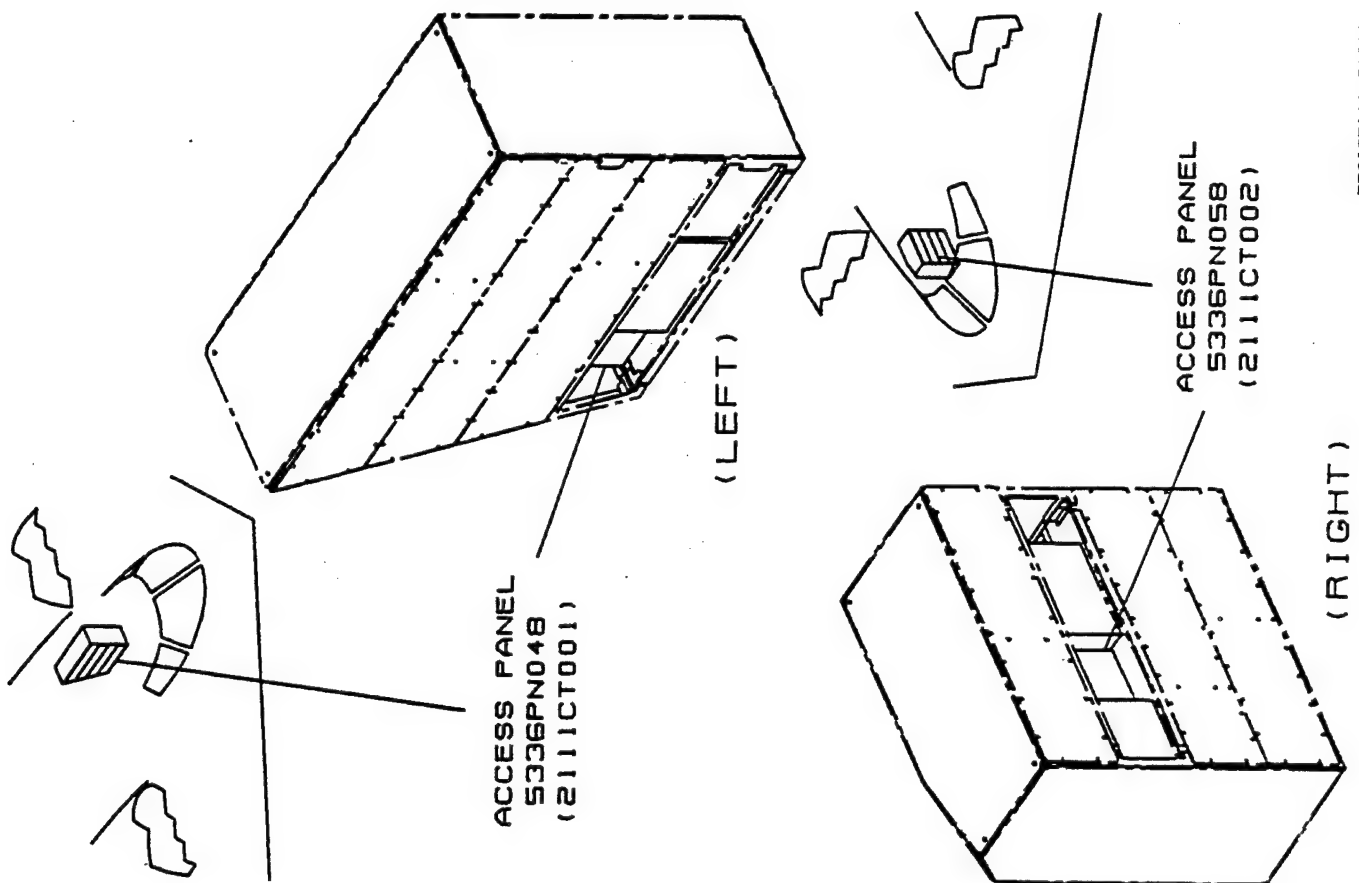
B2AJG2111-0101A

### 10.1.4 Output Cadkey v5.02

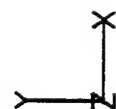


B2AJG2111-0101A

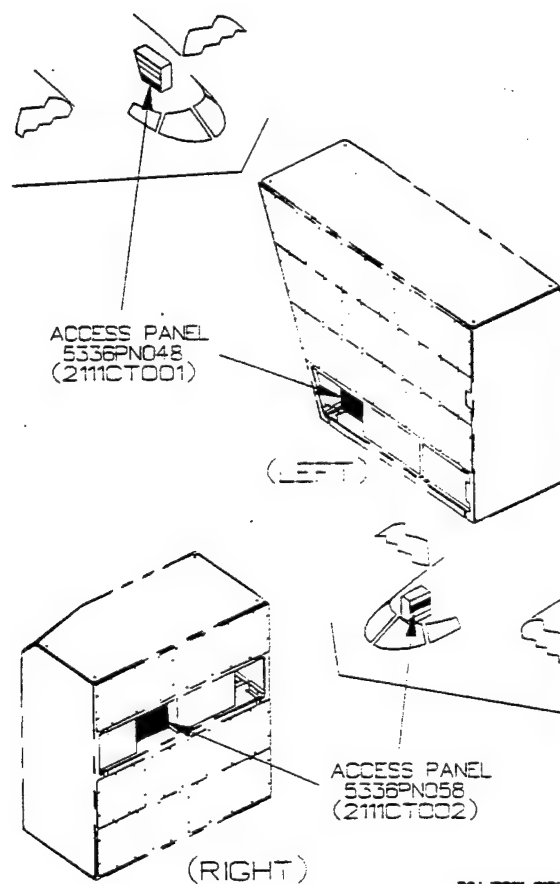
### 10.1.5 Output CheckMark v1.00



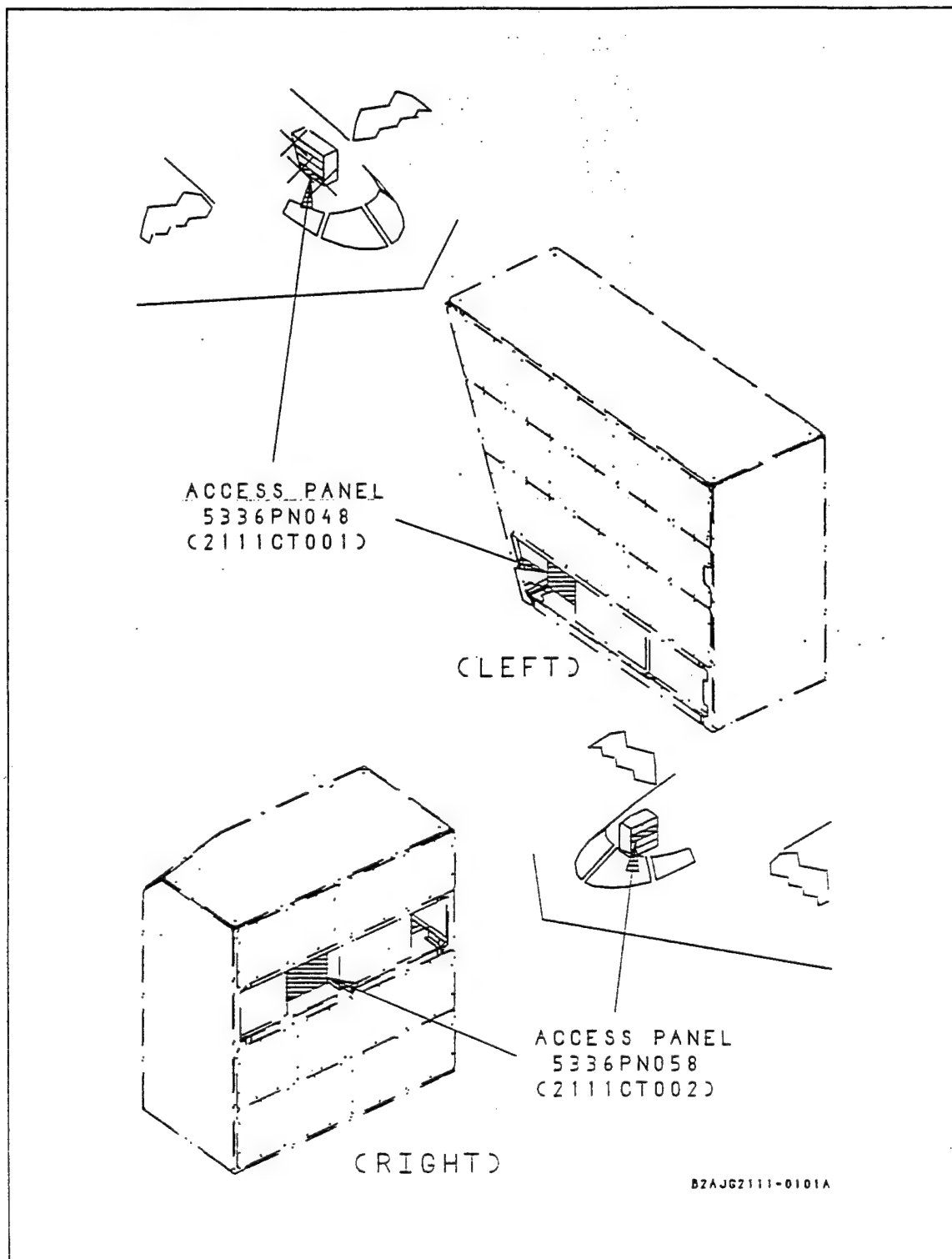
82A/G2111-0101A



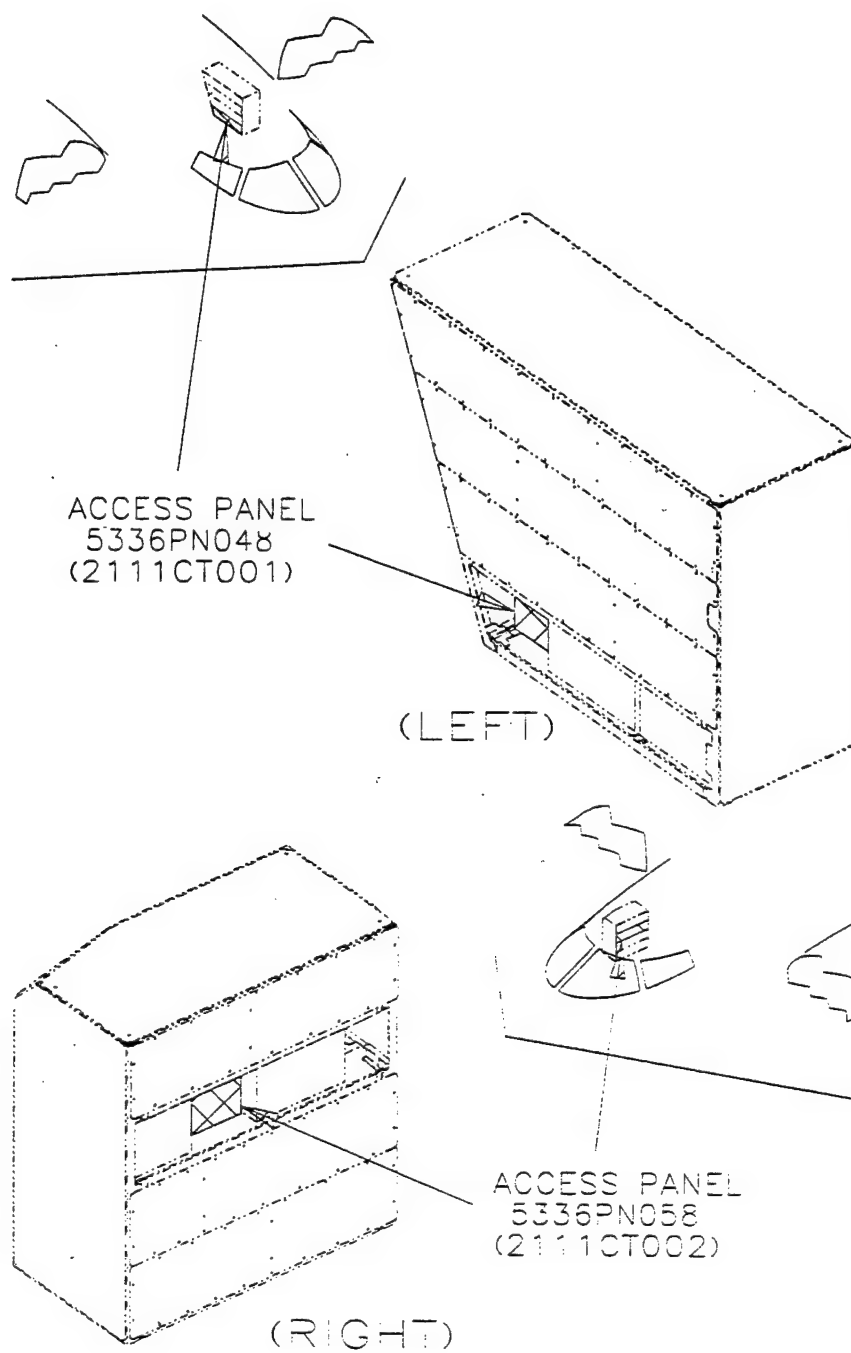
### 10.1.6 Output IGESView



### 10.1.7 Output IGESWorks



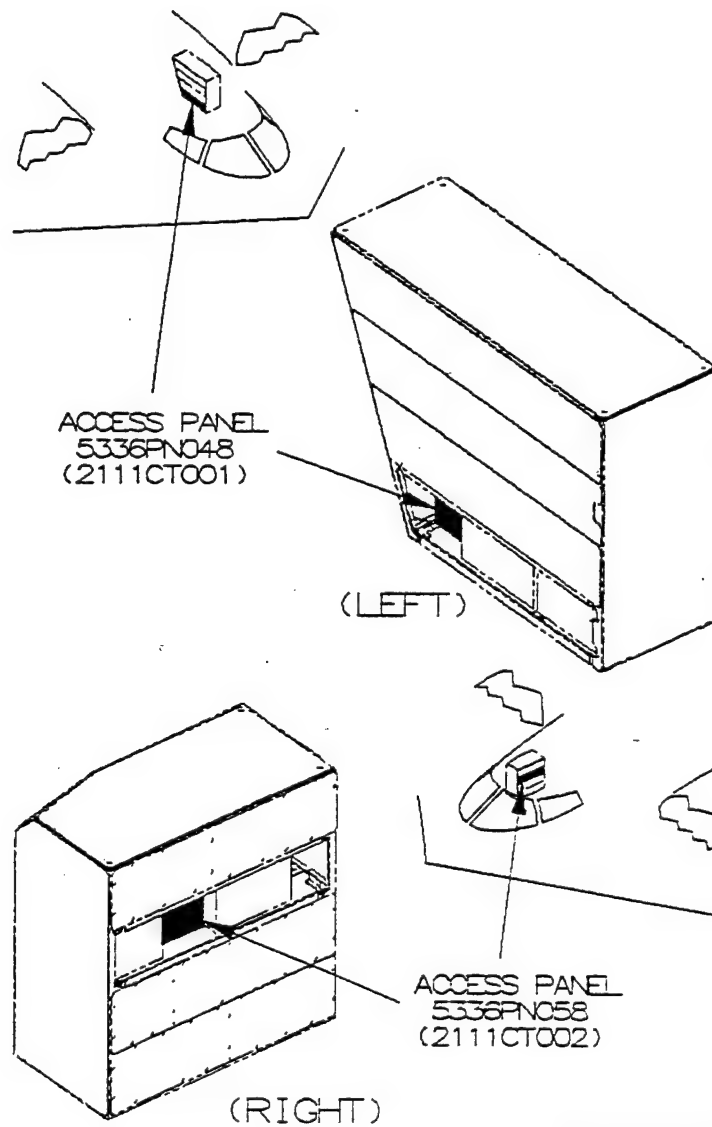
## 10.1.8 Output Preview



B2AJG2111-0101A

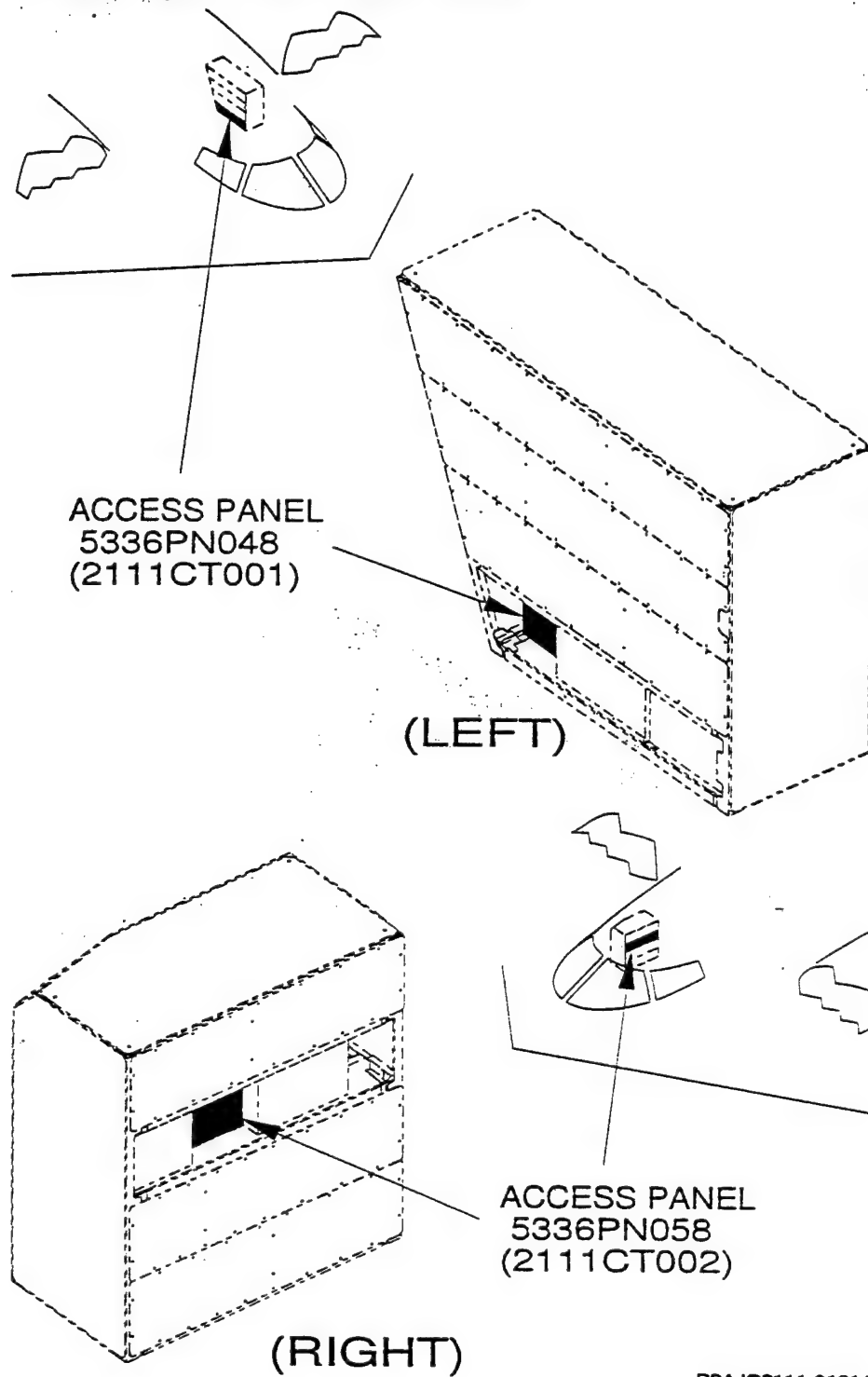
## 10.1.9 Output Wiz Worx

Q004



B2AJG2111-0101A

### 10.1.10 Output iges2draw/IslandDraw



B2AJG2111-0101A



---

## 10.2 File D001Q007

### 10.2.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***  
***      MARCH 1992      ***  
***   IGES Data Analysis   ***  
***   (708) 449-3430      ***
```

Input file is /novell/9330/q007.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is April 13, 1993 9:11 AM

#### \*\*\* File and Product Name Information \*\*\*

```
File name from sender   = '0110B.gef.igs'  
File creation Date.Time = '930218.130543'  
Model change Date.Time = ''  
Author                 = 'NORTHROP B2 ITDS CTB'  
Department             = ''  
Product name from sender = '0110B.gef.igs'  
Destination product name = '0110B.gef.igs'
```

#### \*\*\* Parameter Delimiters \*\*\*

```
Delimiter = ','  
Terminator = ';' 
```

#### \*\*\* Originating System Data \*\*\*

```
System ID           = 'ITDS CONVERTER: GEF_IGES'  
Preprocessor version = '1.0'  
Specification version = 6 (IGES 4.0)
```

#### \*\*\* Precision levels \*\*\*

```
Integer bits = 32  
Floating point - Exponent = 38 Mantissa = 6  
Double precision - Exponent = 308 Mantissa = 15
```

#### \*\*\* Global Model Data \*\*\*

```
Model scale          = 1.0000E+00  
Unit flag            = 1
```

Units = 'IN'  
 Line weights = 1  
 Maximum line thickness = 6.300000E-03  
 Minimum line thickness = 6.300000E-03  
 CAUTION 2317: Maximum line thickness equal to minimum thickness.  
 Granularity = 1.000000E-03  
 Maximum coordinate = 7.243750E+00

Drafting standard applicable to original data is not specified.

\*\*\* Status Flag Summary \*\*\*

Blank status:	Visible	1433
	Blanked	0
Independence:	Independent	1423
	Physically Subordinate	6
	Logically Subordinate	4
	Totally Subordinate	0
Entity use:	Geometry	1417
	Annotation	16
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	1433
	Hierarchy property applies	0
	Not Specified	0

\*\*\* Entity Occurrence Counts \*\*\*

Entity	Form	Level	Count	Type
-----	----	-----	-----	----
100	0	0	11	Circular arc
104	1	0	266	Conic arc - ellipse
106	63	0	6	Simple closed planar curve
110	0	0	676	Line
112	0	0	189	Parametric spline curve
124	0	0	266	Transformation matrix
212	0	0	8	General note
230	0	0	6	Sectioned area (Standard Crosshatching)
404	0	0	1	Drawing

406	16	0	1	Property - Drawing size
406	18	0	2	Property - Intercharacter spacing
410	0	0	1	View - Orthographic parallel

\*\*\* Entity Count by Level \*\*\*

Level	Count
0	1433

\*\*\* Labeling Information \*\*\*

0% of the entities are labeled.

Unlabeled 1433

\*\*\* Line Fonts Used in Data \*\*\*

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
11	-	252	6	-	600	189	-	Solid
-	-	1	-	-	19	-	-	Dashed
-	-	13	-	-	50	-	-	Phantom
-	-	-	-	-	7	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
116	118	120	122	124	125	126	128	
-	-	-	-	266	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
130	132	134	136	138	140	142	144	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

---

\*\*\* Line Widths Used in Data \*\*\*

Weight	Count	Width
Defaulted	1433	(0.0063)

\*\*\* Colors Used in Data \*\*\*

Defaulted	647
Black	778
White	8

\*\*\*\*\*  
\*\*\*\*\* ENTITY ANALYSIS \*\*\*\*\*  
\*\*\*\*\*

\*\*\* Entity type: 100

\*\*\* Entity type: 104

WARNING 2265: Start point off conic by 4.023317E-03 at D 955.  
WARNING 2039: End point off conic by 4.023317E-03 at D 955.  
WARNING 2265: Messages regarding invalid start point suppressed.  
WARNING 2039: Messages regarding conic end points suppressed.

\*\*\* Entity type: 106

\*\*\* Entity type: 110

-- 676 lines averaging 1.380248E-01 units --

\*\*\* Entity type: 112

WARNING 2238: Polynomial segment (0) at D 1351 is degenerate.  
WARNING 2238: Polynomial segment (1) at D 1421 is degenerate.  
WARNING 2238: Polynomial segment (0) at D 1467 is degenerate.  
WARNING 2238: Polynomial segment (1) at D 1567 is degenerate.  
WARNING 2238: Polynomial segment (0) at D 1627 is degenerate.

\*\*\* Entity type: 124

266 transformation matrices, 266 non-zero translations.  
NOTE 2341: 266 matrices contain translation information.

\*\*\* Entity type: 212

8 text strings in data file.

---

Average text aspect ratio in file is 0.9635382.  
Minimum text aspect ratio in file is 0.8928572.  
Maximum text aspect ratio in file is 0.9923470.

FONTS USED IN FILE

FONT	COUNT	NAME
1	8	Default ASCII Style

\*\*\* Entity type: 230

\*\*\* Entity type: 404

Drawing at D 5 contains 1 views.  
Drawing at D 5 contains 0 annotation entities.

\*\*\* Entity type: 406

\*\*\* Entity type: 410

Scale of view at D 1 is 1.000000E+00.  
Orthographic View entity at D 1 has 0 clipping planes specified.  
XMIN = Not Set XMAX = Not Set  
YMIN = Not Set YMAX = Not Set  
ZMIN = Not Set ZMAX = Not Set

\*\*\* Message Summary \*\*\*

2015: 39 Mathematically incorrect definitions.  
2018: 1 Problems with line weight/width display information.

\*\*\* Error Summary \*\*\*

0 fatal errors  
0 severe errors  
0 errors  
39 warnings  
1 cautions  
0 nitpicks  
1 notes

\*\*\* End of Analysis of /novell/9330/q007.igs \*\*\*

## 10.2.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

File: I:/9330/Q007.xli

Date: Tue, Apr 13, 1993

Time: 09:54:38

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750

Translating from IGES file: I:/9330/Q007.IGS  
to AutoCAD Drawing: C:\Q007.dwg

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01

Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin

5

DOT

acad.lin

=====

Parse phase

\*\*\* Warning (IEVM\_RADII\_NOT\_EQUAL\_100) \*\*\*

(DE 895, TF 100:0) Entity's radii are not equal. Start point radius:  
2.8024447e-003. Terminate point radius: 3.3702065e-003.

Action taken: Start point moved 2.8388087e-004 units from -2.5695066e+000,  
5.6756716e+000 to -2.5697890e+000, 5.6756419e+000. Terminate point moved  
2.8388087e-004 units from -2.5668151e+000, 5.6725955e+000 to -2.5668071e+000,  
5.6728793e+000.

\*\*\* Warning (IEVM\_BAD\_VECTOR\_124) \*\*\*

(DE 897, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

<<<< PART OF LOG REMOVED HERE >>>>

\*\*\* Warning (IEVM\_BAD\_CONTINUITY\_112) \*\*\*

(DE 1329, TF 112:0) Entity's Degree of Continuity, 0, is incorrectly specified.  
Degree of Continuity calculated to be 2.

Action taken: Degree of Continuity set to 2.

<<<< PART OF LOG REMOVED HERE >>>>

\*\*\* Warning (IEVM\_RADII\_NOT\_EQUAL\_100) \*\*\*

(DE 2233, TF 100:0) Entity's radii are not equal. Start point radius:  
1.5103175e-002. Terminate point radius: 1.5428022e-002.

Action taken: Start point moved 1.6242327e-004 units from -2.1480713e+000,  
3.7761354e+000 to -2.1479120e+000, 3.7761672e+000. Terminate point moved  
1.6242327e-004 units from -2.1772947e+000, 3.7676759e+000 to -2.1771430e+000,  
3.7677338e+000.

=====

Start Section:

CONFORMANCE:

MIL-D-28000 Amendment1, 20 December 1988  
Technical Illustration Class I Subset

ILLUSTRATION IDENTIFIER:

0110B.gef.igs

Global Section:

Parameter Delimiter: ,  
Record Delimiter: ;  
Sending Product ID: 0110B.gef.igs  
File Name: 0110B.gef.igs  
System ID: ITDS CONVERTER: GEF\_IGES  
Preprocessor Version: 1.0  
Size of Integer: 32  
Sgl. Precision Mag: 38  
Sgl. Precision Sig: 6  
Dbl. Precision Mag: 308  
Dbl. Precision Sig: 15  
Receiving Product ID: 0110B.gef.igs  
Model Space Scale: 1.000000  
Unit Flag: 1  
Unit String: IN  
# of Line Weights: 1  
Maximum Line Width: 0.006300  
Creation Date: 02/18/93 13:05:43  
Minimum Resolution: 0.001000  
Maximum Coordinate: 7.243750  
Author: NORTHROP B2 ITDS CTB  
Organization:  
IGES Version Number: 6  
Drafting Standard: 0

Entity Summary:

Type	Form	Description	Count
100	0	Circular Arc	11
104	1	Ellipse	266
106	63	Simple Closed Planar Curve	6
110	0	Line	676
112	0	Parametric Spline Curve	189
124	0	Transformation Matrix	266
212	0	General Note (Simple)	8
230	0	Section Area (Standard Fill)	6
404	0	Drawing (form 0)	1
406	16	Property (Drawing Size)	1
406	18	Property (Int-character Spacing)	2
410	0	View	1



Total 1433

Translation phase

Drawing Entity (404 Form 0) at DE 5, with

name = ,  
size = 3.937500, 6.300000,  
units = IN,

was processed in the AutoCAD drawing file: C:\Q007.dwg

\*\*\* Warning (ACAD\_NEW\_VIEW\_VOLUME\_GENERATED) \*\*\*

( DE: 1 TF: 410:0 )

A new view volume has been generated for the view with:

XMIN (-4.657909), XMAX (0.396758),  
YMIN (0.451881), YMAX (7.728314),  
ZMIN (-0.693743), ZMAX (0.693743).

IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
100	0	Circular Arc	11	11	0
104	1	Ellipse	266	266	0
106	63	Simple Closed Planar Curve	7	7	0
110	0	Line	676	676	0
112	0	Parametric Spline Curve	189	189	0
212	0	General Note (Simple)	8	8	0
230	0	Section Area (Standard Fill)	6	6	0
404	0	Drawing (form 0)	1	1	0
406	16	Property (Drawing Size)	1	1	0
410	0	View	1	1	0
Totals			1166	1166	0

Unsupported IGES Entity Summary

Type	Form	Description	Count
406	18	Property (Int-character Spacing)	2
Total			2

AutoCAD Entity Summary

Entity	Created	Errors
--------	---------	--------

```
=====
LINE          858      0
Text          8        0
ARC           11        0
SOLID         5         0
INSERT        1         0
POLYLINE      287        0
BLOCK         1         0

Totals  =====
          1171      0
=====
```

=====

Error Summary:

The following message was issued 11 time(s)  
Entity's radii are not equal. Start point radius: %.7e. Terminate point  
radius: %.7e.

The following message was issued 265 time(s)  
Entity's start point not on the conic. Value found was %.7e, %.7e.

The following message was issued 265 time(s)  
Entity's End Point not on the conic. Value found was %.7e, %.7e.

The following message was issued 161 time(s)  
Entity's Degree of Continuity, %d, is incorrectly specified. Degree of  
Continuity calculated to be %d.

The following message was issued 261 time(s)  
Entity has a column which is not a unit vector.

The following message was issued 1 time(s)  
A new view volume has been generated for the view with:  
XMIN (%lf), XMAX (%lf),  
YMIN (%lf), YMAX (%lf),  
ZMIN (%lf), ZMAX (%lf).

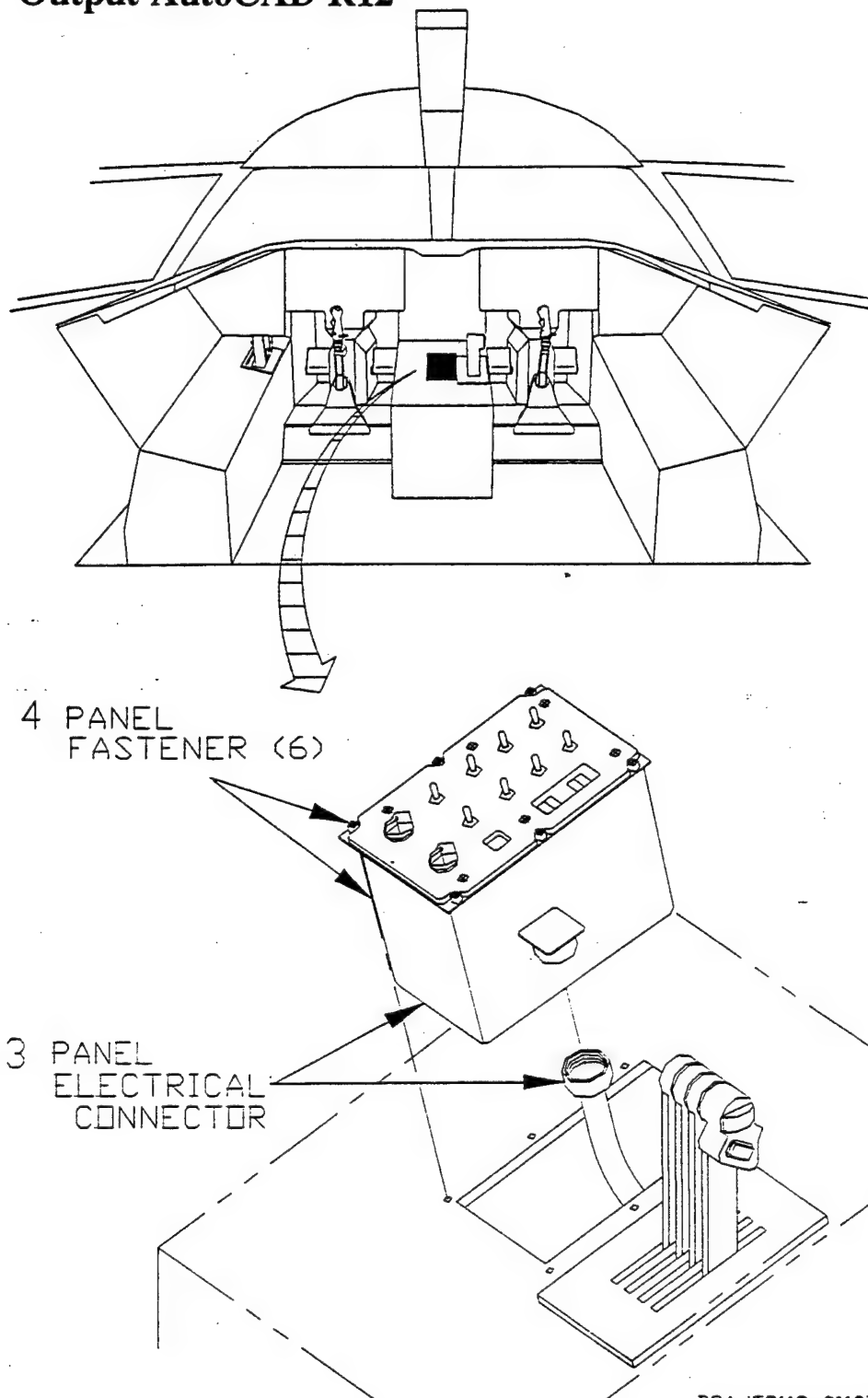
Status: 0  
Warning: 964  
Error: 0  
Fatal: 0

Elapsed Time:

Processor: 00:01:01  
Clock: 00:01:01

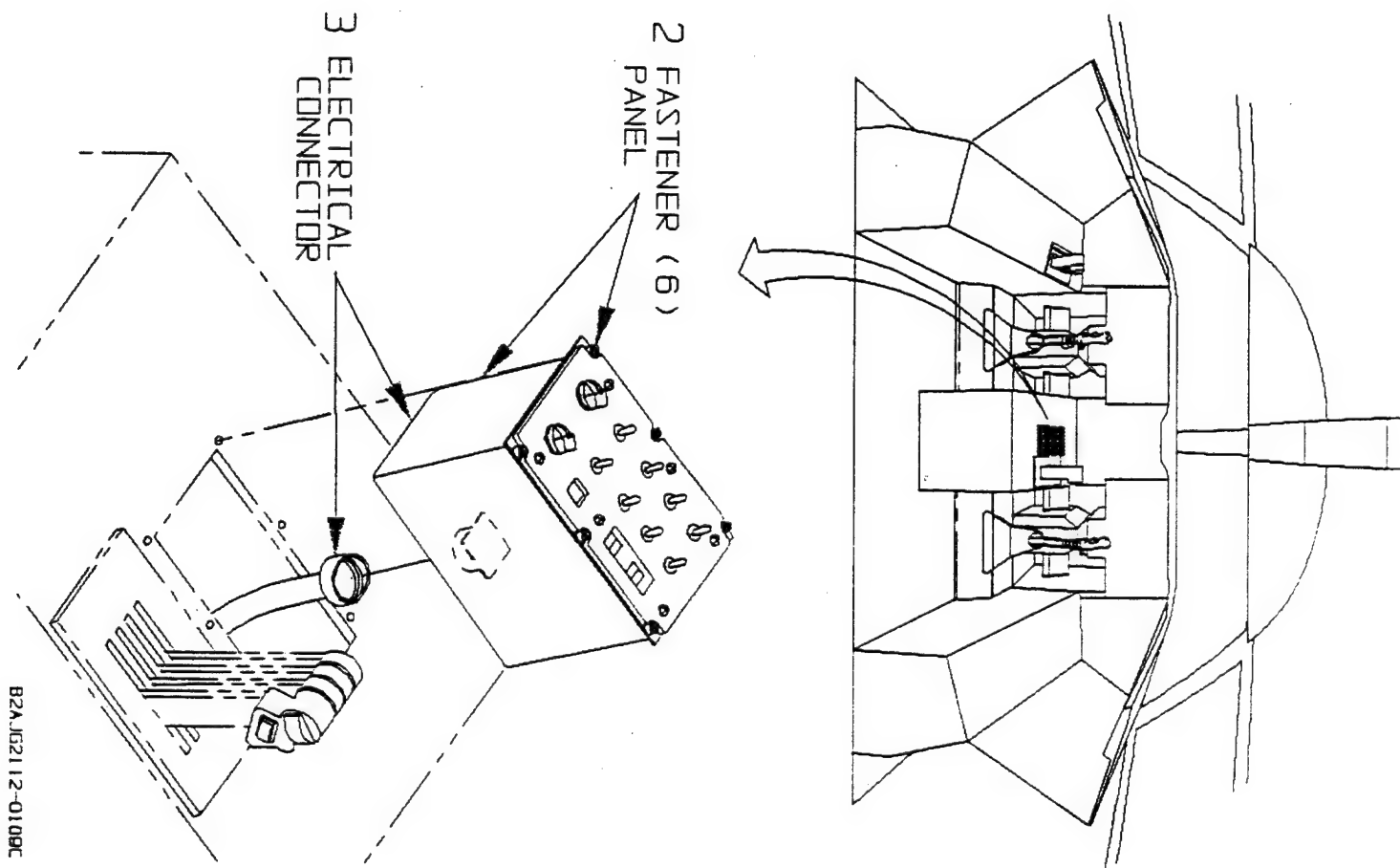
=====

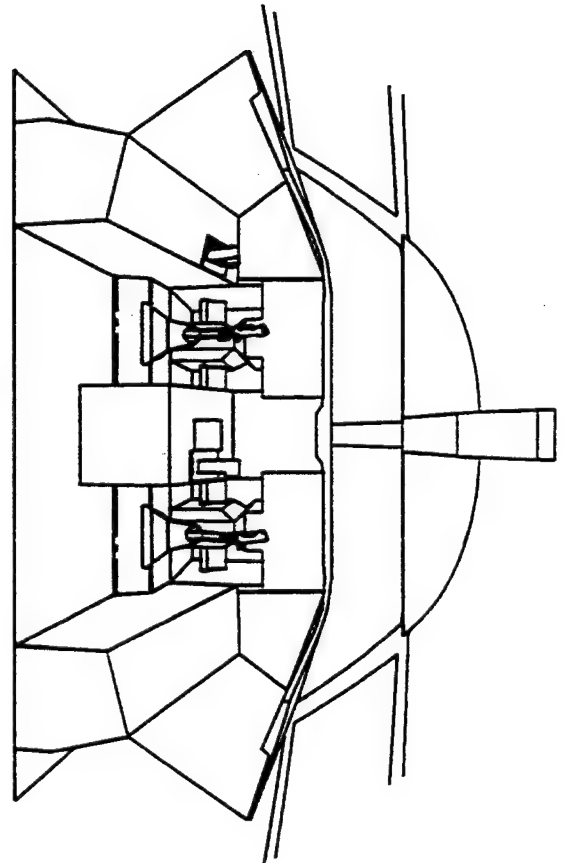
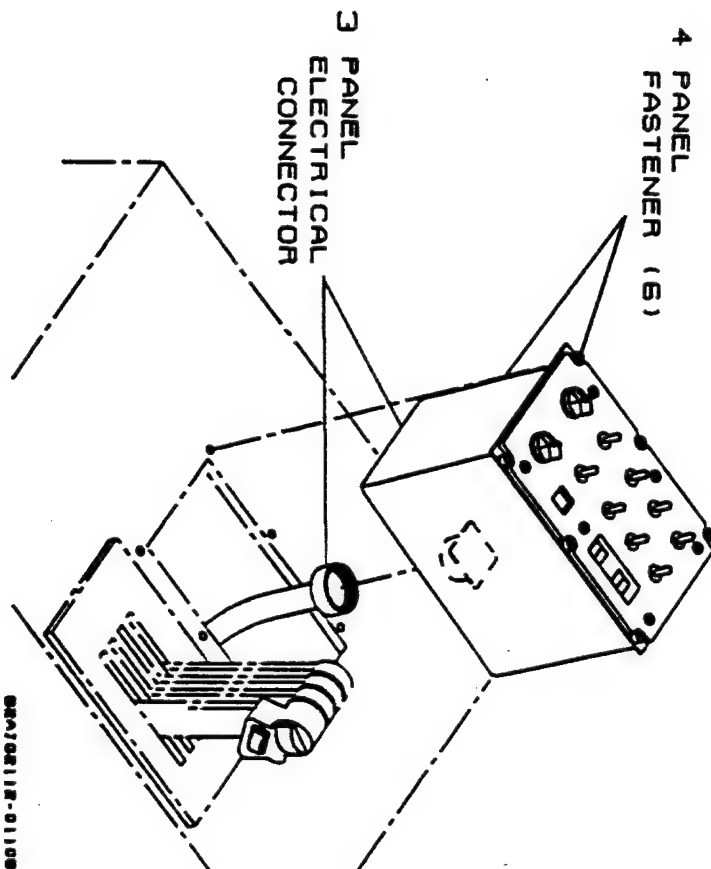
### 10.2.3 Output AutoCAD R12



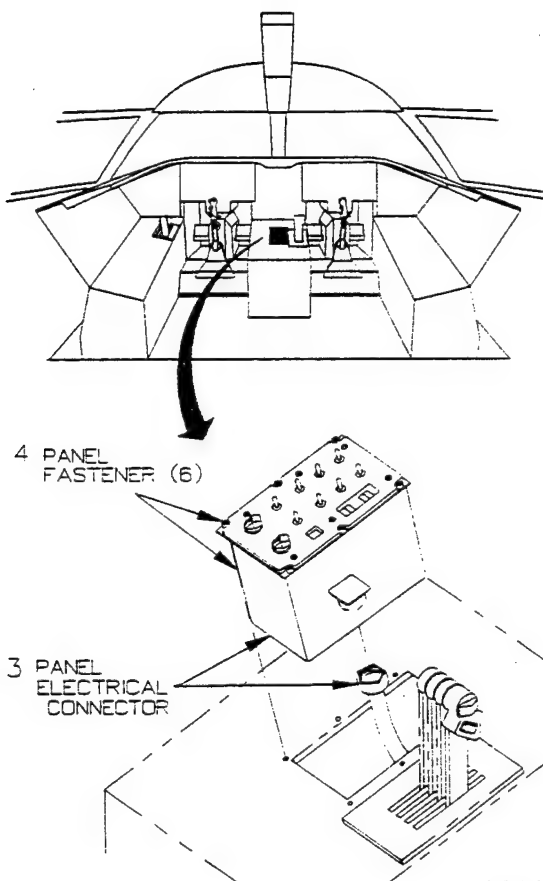
B2AJG2112-0110B

## 10.2.4 Output Cadkey v5.02

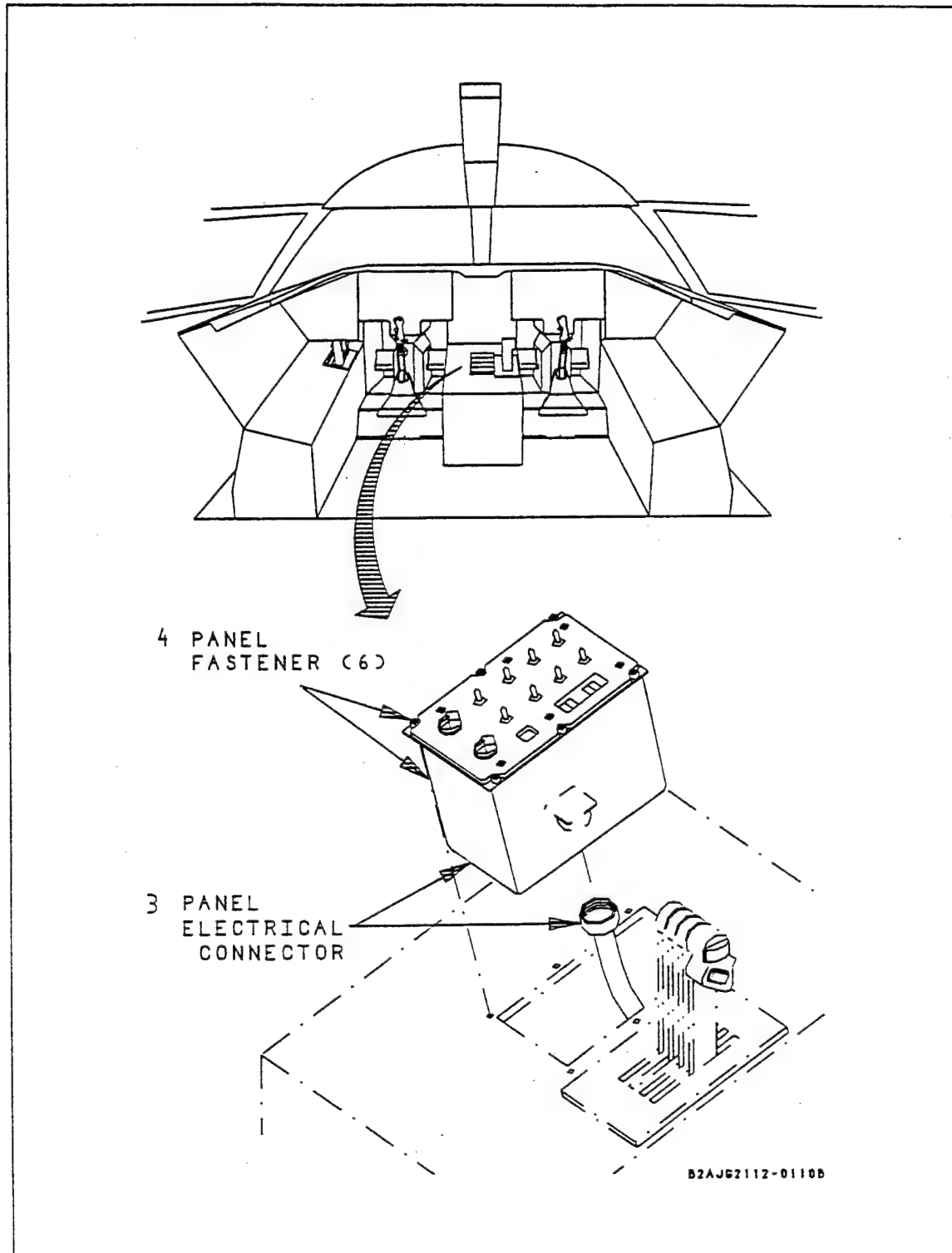




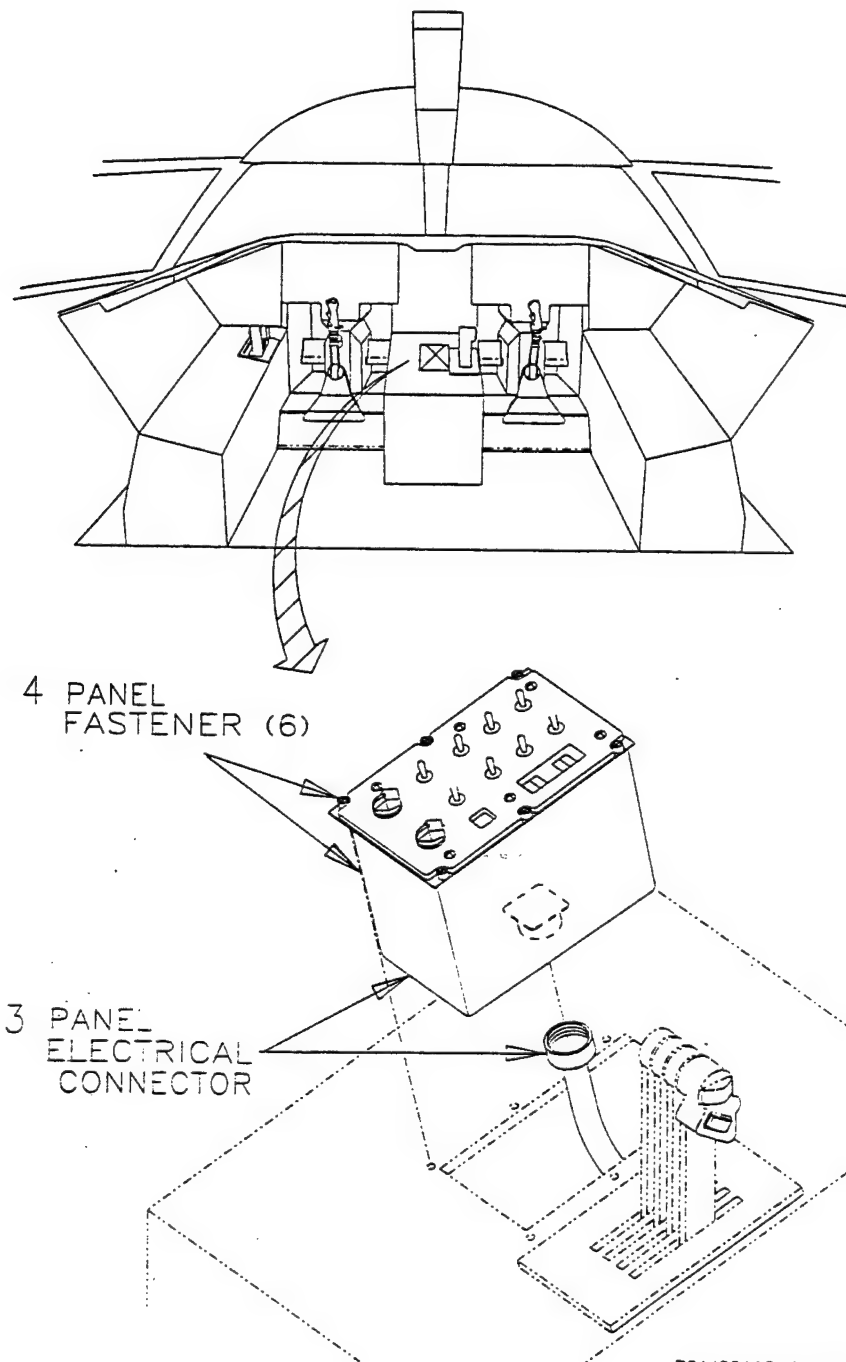
## 10.2.6 Output IGESView



### 10.2.7 Output IGESWorks



## 10.2.8 Output Preview

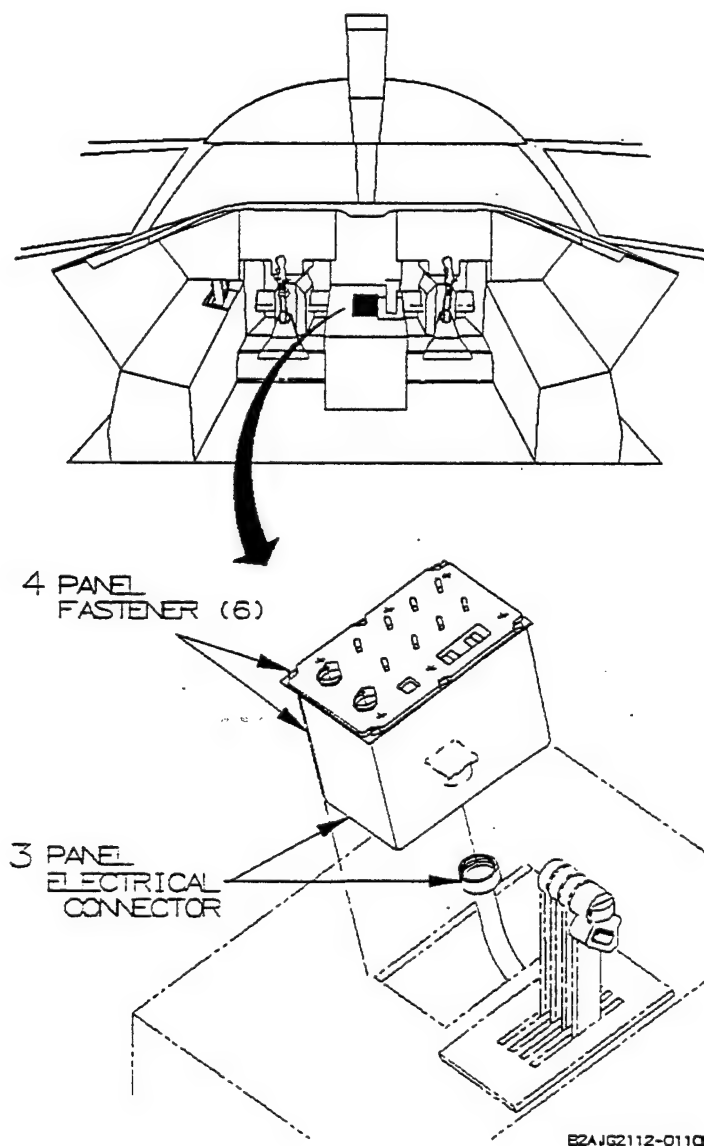


B2AJG2112-0110B

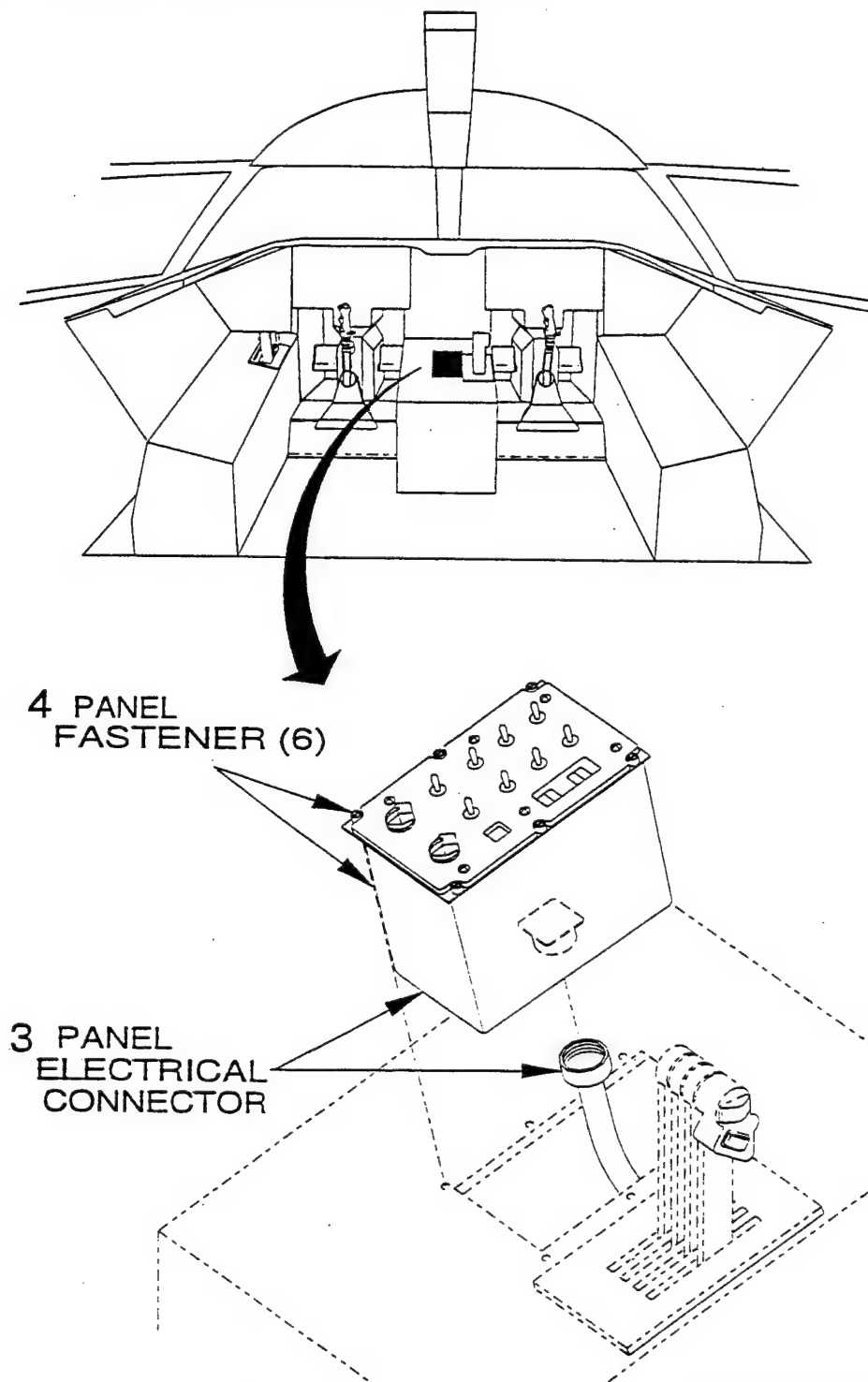


## 10.2.9 Output Wiz Worx

Q007



### 10.2.10 Output iges2draw/IslandDraw



B2AJG2112-0110B

## 11. Appendix C - Detailed SGML Analysis

### 11.1 Datalogics Parser Log

SGML Document Type Definition Parser  
Version 3.36  
Copyright (c) Datalogics 1988, 1989, 1990, 1991  
An SGML System Conforming to  
International Standard ISO 8879  
Standard Generalized Markup Language

Log file: '9330.LOG'  
SDO File: 'ctndocl.sdo'  
Namecase General is yes.  
Namecase Entity is no.  
Parsing DTD file: '9330.dtd'

This DTD conforms to the ISO 8879 standard

DTO file '9330.DTO' created

closing statistics:  
Capacity points: 27328  
Bytes of DTO file string space: 7895  
SGML descriptor blocks: 2983

Document Type Definition is compliant and parsed normally.

Program status code: 0.

---

## 11.2 Exoterica XGMLNormalizer Parser

No reported errors.

## 11.3 Exoterica Validator

```
<!-- Entity has no name, system id or public id in formal file -->.
<!-- **Warning**:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "ENTRY".
  (((#PCDATA|xref|change|emphasis|hcp|hci|ocp|
  ^^^^^^
-->
<!-- **Warning**:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "NOTICE".
  (((#PCDATA|xref|change|emphasis|hcp|hci|ocp|
  ^^^^^^
-->
<!-- **Warning** in "9330.sgm", line 418:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "RESULT".
  <!ELEMENT result      - o (%text; ,faultcode?)>
                                     /\
-->
<!-- **Warning** in "9330.sgm", line 1151:
  There is no element with an IDREF or IDREFS attribute value equal to a
  specified ID value.
  The unreferenced ID attribute value is "TOC".
-->
<!-- 4 warnings reported. -->
```

---

## 11.4 Sema Mark-it Log

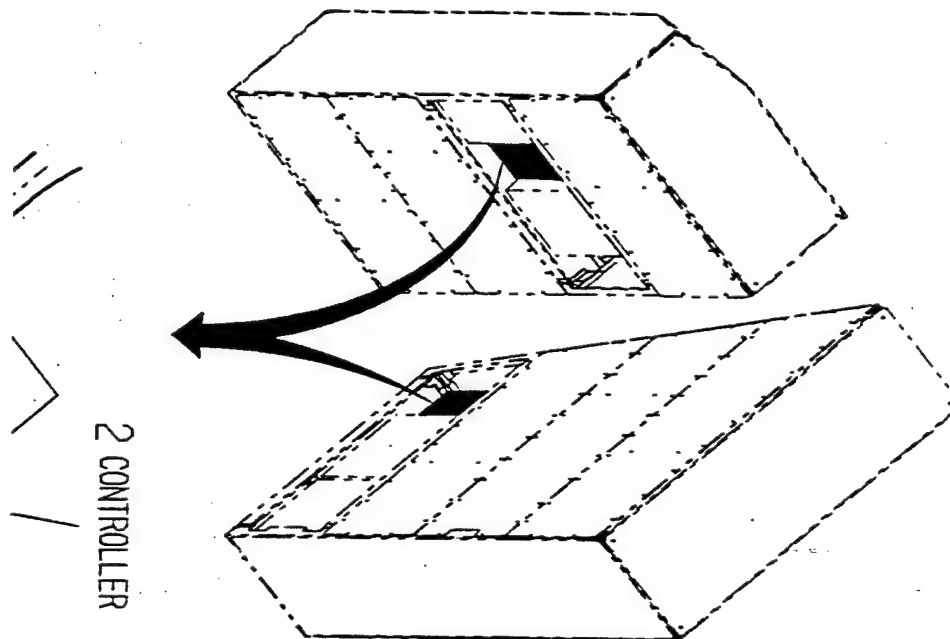
No reported errors.

## 11.5 Public Domain sgmls Log

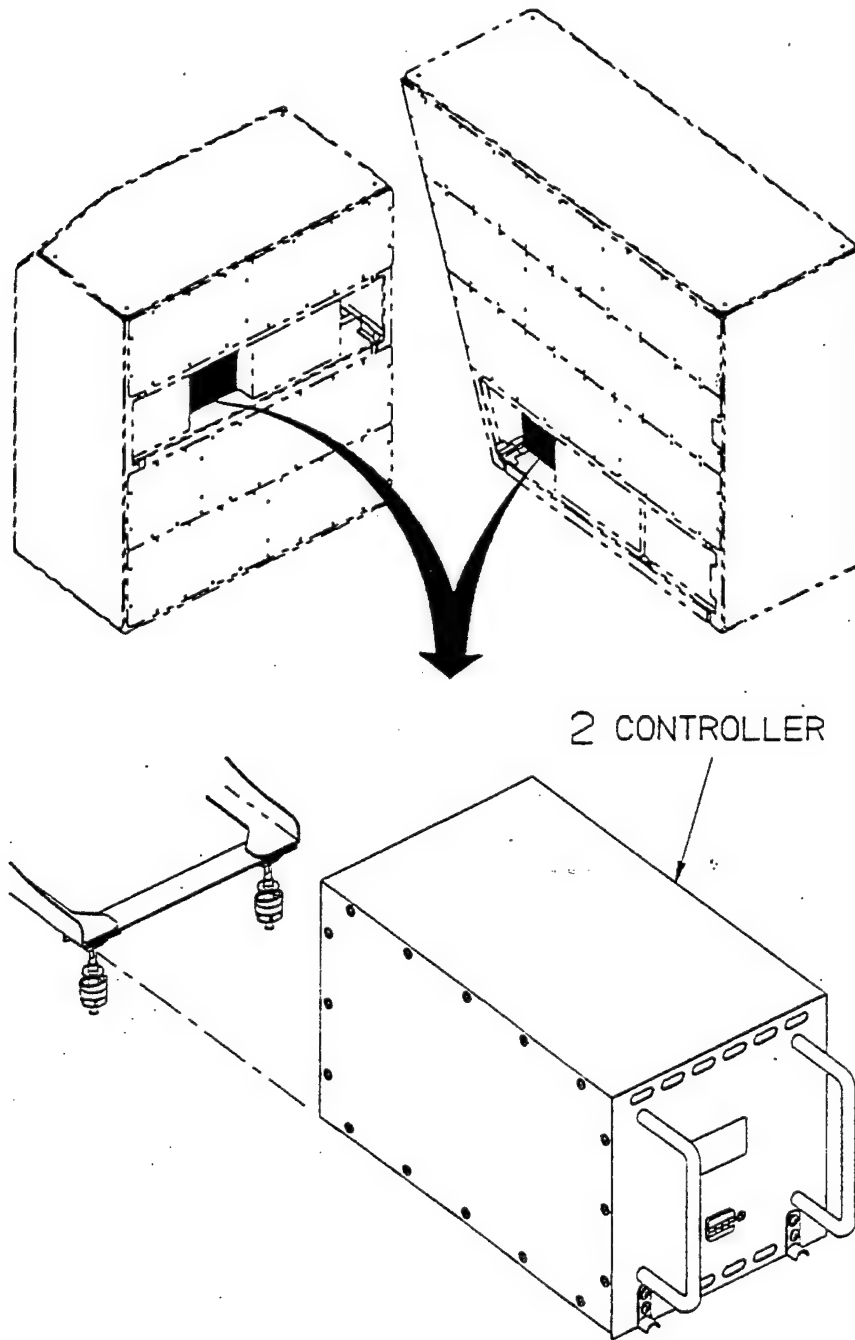
TOTALCAP 51509/200000  
ENTCAP 7648/200000  
ENTCHCAP 3873/200000  
ELEMCA 3456/200000  
GRPCAP 20320/200000  
EXGRPCAP 256/200000  
EXNMCA 544/200000  
ATTCAP 10720/200000  
ATTCHCAP 296/200000  
AVGRPCAP 3840/200000  
NOTCAP 192/200000  
NOTCHCAP 364/200000

## 12. Appendix D - Detailed Raster Analysis

### 12.1 Output HiJaak for Windows



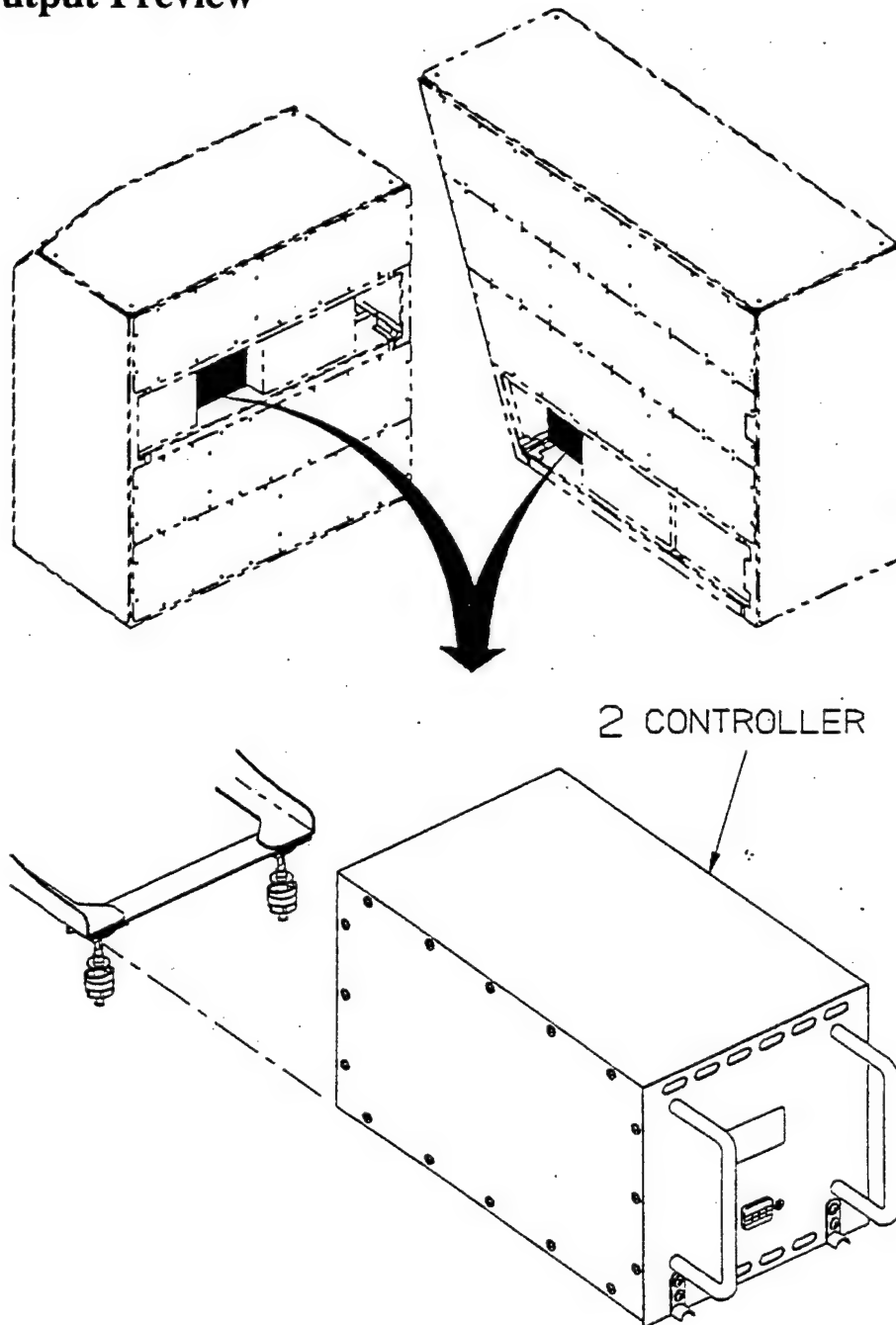
## 12.2 Output g42tiff/IslandPaint



(TYPICAL)

B2AJG2111-0104D

### 12.3 Output Preview

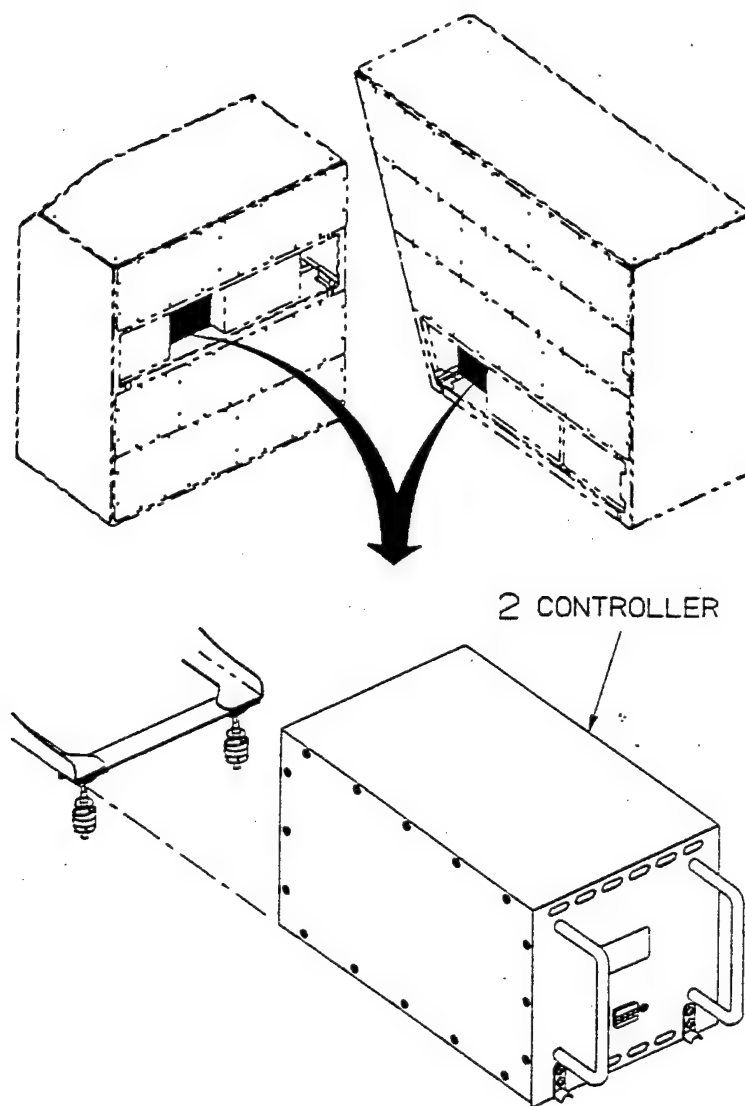


(TYPICAL)

B2AJG2111-0104D



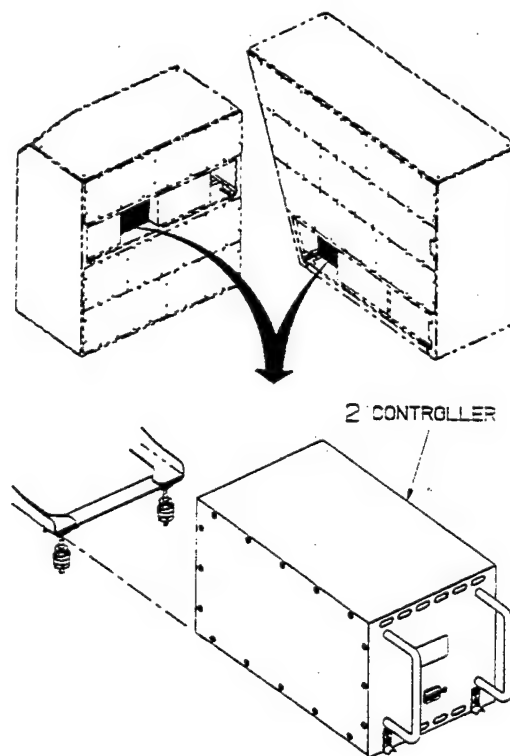
## 12.4 Output HiJaak/Ventura Publisher



(TYPICAL)

B2AJG2111-0104D

## 12.5 Output IGESView



(TYPICAL)

B2AJ02111-01040

---

## 13. Appendix E - Detailed CGM Analysis

### 13.1.1 Parser Log MetaCheck

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer  
Copyright 1988-91 CGM Technology Software  
Execution Date: 04/13/93 Time: 12:41:41

Metafile Examined : i:\9330\c008

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

===== Trace Report =====

Tracing not selected.

===== CGM Conformance Violation Report =====

No Errors Detected

===== CALS CGM Profile (MIL-D-28003) Report =====

No profile discrepancies detected.

===== Conformance Summary Report =====

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer  
Copyright 1988-91 CGM Technology Software  
Execution Date: 04/13/93 Time: 12:41:47

Name of CGM under test: i:\9330\c008.cgm

Encoding : Binary

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

BEGIN METAFILE string : "0103D.cgm"

METAFILE DESCRIPTION : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 154; string contains: "Picture 1"

Private values encountered in CGM

---

Conformance Summary : This file conforms to the CGM specification.

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

1 Pictures Tested  
2192 Elements Tested  
48616 Octets Tested

=====  
| No Errors Were Detected |  
=====

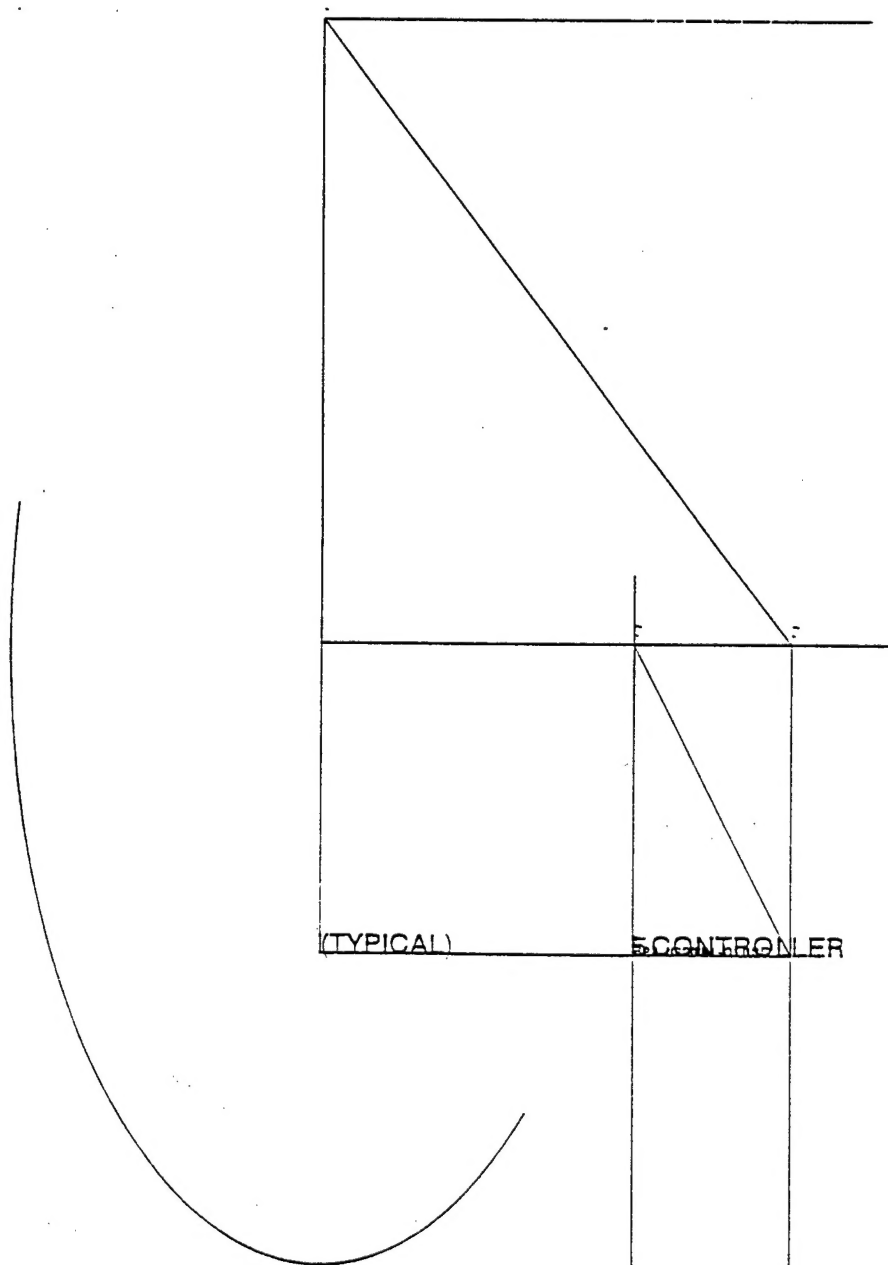
===== End of Conformance Report =====

### 13.1.2 validegm Log

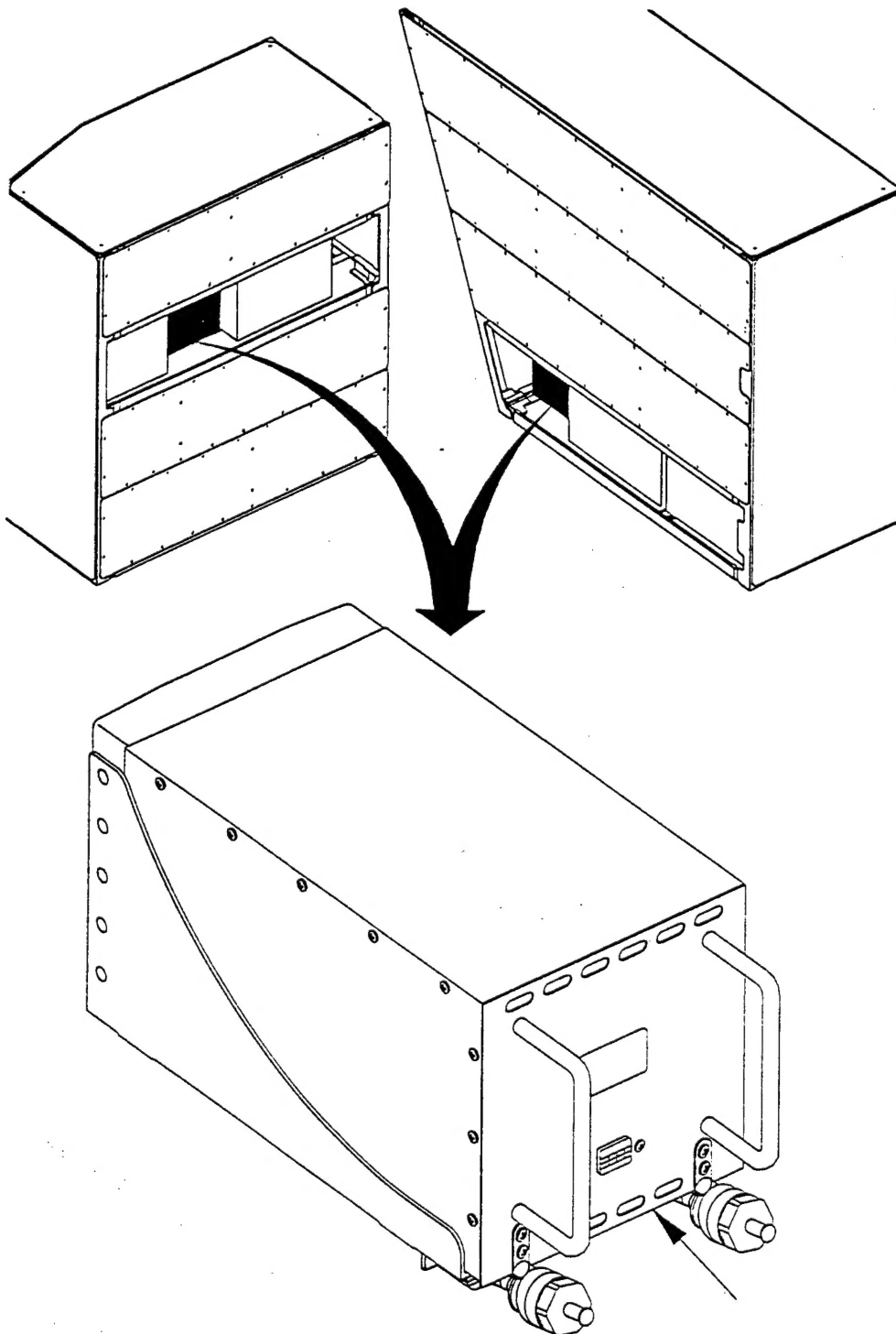
Analysis for file c008.cgm using table table  
ERROR: illegal in this state (2), std B  
ERROR: required precursor (0, 4) not yet seen  
(14.1, 0) (3, 6, 2) Clip Indicator OFF  
(0, 1) occurred 1 time  
(0, 2) occurred 1 time  
(0, 3) occurred 1 time  
(0, 4) occurred 1 time  
(0, 5) occurred 1 time  
(1, 1) occurred 1 time  
(1, 2) occurred 1 time  
(1, 3) occurred 1 time  
(1, 4) occurred 1 time  
(1, 5) occurred 1 time  
(1, 6) occurred 1 time  
(1, 7) occurred 1 time  
(1, 8) occurred 1 time  
(1, 9) occurred 1 time  
(1, 10) occurred 1 time  
(1, 11) occurred 1 time  
(1, 12) occurred 1 time  
(1, 13) occurred 1 time  
(2, 2) occurred 1 time  
(2, 6) occurred 1 time  
(2, 7) occurred 1 time  
(3, 2) occurred 1 time  
(3, 6) occurred 1 time

(3, 6) occurred illegally 1 time  
(4, 1) occurred 624 times  
(4, 4) occurred 5 times  
(4, 7) occurred 5 times  
(4, 15) occurred 20 times  
(4, 17) occurred 165 times  
(4, 18) occurred 565 times  
(5, 2) occurred 99 times  
(5, 3) occurred 99 times  
(5, 4) occurred 99 times  
(5, 10) occurred 1 time  
(5, 12) occurred 3 times  
(5, 13) occurred 3 times  
(5, 14) occurred 1 time  
(5, 15) occurred 4 times  
(5, 16) occurred 4 times  
(5, 17) occurred 1 time  
(5, 18) occurred 1 time  
(5, 22) occurred 95 times  
(5, 23) occurred 2 times  
(5, 27) occurred 93 times  
(5, 28) occurred 93 times  
(5, 29) occurred 93 times  
(5, 30) occurred 95 times  
(5, 34) occurred 1 time

### 13.1.3 Output Harvard Graphics



### 13.1.4 Output cgm2draw/IslandDraw



### 13.1.5 Output CADLeaf

